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MINE SAFETY AND HEALTH ADMINISTRATION

TECHNICAL SUPPORT

United States Department of Labor

MSHA

Mine Safety and Health Administration

## HEALTH AND SAFETY ANALYSIS CENTER
## DENVER, COLORADO

SUMMARY OF SELECTED INJURY EXPERIENCE AND WORKTIME FOR THE MINING INDUSTRY IN THE UNITED STATES, 1931-77

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# SUMMARY OF SELECTED INJURY EXPERIENCE AND WORKTIME FOR THE MINING INDUSTRY IN THE UNITED STATES, 1931-77

by

Staff, Branch of Injury and Employment Information

Health and Safety Analysis Center

CONTENTS


| | Page |
|---|---|
| Abstract | 1 |
| Introduction | 1 |
| Scope of statistics | 2 |
| Historical treatment of injury experience in mining in the United States | 2 |
| Definition of terms | 3 |


ILLUSTRATIONS


| | | |
|---|---|---|
| Figure 1. | Injury-frequency rates, worktime, and production data for all coal operations in the United States, 1931-77 | 7 |
| Figure 2. | Injury-frequency rates and worktime data, totals of all metal/nonmetal operations in the United States, 1950-77 | 41 |
| Figure 3. | Injury-frequency rates and worktime data for all metal operations in the United States, 1950-77 | 45 |
| Figure 4. | Injury-frequency rates and worktime data for all nonmetal operations in the United States, 1950-77 | 49 |
| Figure 5. | Injury-frequency rates and worktime data for all stone operations in the United States, 1950-77 | 53 |
| Figure 6. | Injury-frequency rates and worktime data for all sand and gravel operations in the United States, 1958-77 | 57 |


TABLES


| | | |
|---|---|---|
| 1. | Injury experience and worktime data at coal, metal, nonmetal, stone, and sand and gravel mines and mills in the United States, 1931-77 | 6 |
| 2. | Injury experience, worktime, and production data at all coal mines in the United States, 1931-77 | 8 |
| 2A. | Injury experience, worktime, and production data at Pennsylvania anthracite mines in the United States, 1931-77 | 9 |
| 2B. | Injury experience, worktime, and production data at bituminous coal mines in the United States, 1931-77 | 10 |
| 3. | Number of fatal injuries, by general work location, at all coal mines in the United States, 1931-77 | 11 |
| 3A. | Number of fatal injuries, by general work location, at Pennsylvania anthracite mines in the United States, 1931-88 | 12 |
| 3B. | Number of fatal injuries, by general work location, at bituminous coal mines in the United States, 1931-77 | 13 |
| 4. | Number of nonfatal disabling injuries, by general work location, at all coal mines in the United States, 1931-77 | 14 |
| 4A. | Number of nonfatal disabling injuries, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 15 |
| 4B. | Number of nonfatal disabling injuries, by general work location, at bituminous coal mines in the United States, 1931-77 | 16 |
| 5. | Fatal injury-frequency rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77 | 17 |
| 5A. | Fatal injury-frequency rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 18 |
| 5B. | Fatal injury-frequency rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77 | 19 |

TABLES--Continued


| | | Page |
|---|---|---|
| 6. | Nonfatal disabling injury-frequency rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77 | 20 |
| 6A. | Nonfatal disabling injury-frequency rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 21 |
| 6B. | Nonfatal disabling injury-frequency rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77 | 22 |
| 7. | Fatal injury-severity rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77 | 23 |
| 7A. | Fatal injury-severity rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 24 |
| 7B. | Fatal injury-severity rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77 | 25 |
| 8. | Nonfatal disabling injury-severity rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77 | 26 |
| 8A. | Nonfatal disabling injury-severity rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 27 |
| 8B. | Nonfatal disabling injury-severity rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77 | 28 |
| 9. | Average men working daily, by general work location, at all coal mines in the United States, 1931-77 | 29 |
| 9A. | Average men working daily, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 30 |
| 9B. | Average men working daily, by general work location, at bituminous coal mines in the United States, 1931-77 | 31 |
| 10. | Man-hours worked, by general work location, at all coal mines in the United States, 1931-77 | 32 |
| 10A. | Man-hours worked, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 33 |
| 10B. | Man-hours worked, by general work location, at bituminous coal mines in the United States, 1931-77 | 34 |
| 11. | Production in short tons, by general work location, at all coal mines in the United States, 1931-77 | 35 |
| 11A. | Production in short tons, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 36 |
| 11B. | Production in short tons, by general work location, at bituminous coal mines in the United States, 1931-77 | 37 |
| 12. | Count of operations, by general work location, at all coal mines in the United States, 1931-77 | 38 |
| 12A. | Count of operations, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 | 39 |
| 12B. | Count of operations, by general work location, at bituminous coal mines in the United States, 1931-77 | 40 |

TABLES--Continued


| | | Page |
|---|---|---|
| 13. | Injury experience and worktime data at metal, nonmetal, stone, and sand and gravel mines and mills in the United States, 1931-77 | 42 |
| 14. | Injury experience and worktime data at metal, nonmetal, stone, and sand and gravel mines in the United States, 1931-77 | 43 |
| 15. | Injury experience and worktime data at metal, nonmetal, and stone mills in the United States, 1931-77 | 44 |
| 16. | Injury experience and worktime data at metal mines and mills in the United States, 1931-77 | 46 |
| 17. | Injury experience and worktime data at metal mines in the United States, 1931-77 | 47 |
| 18. | Injury experience and worktime data at metal mills in the United States, 1931-77 | 48 |
| 19. | Injury experience and worktime data at nonmetal mines and mills in the United States, 1931-77 | 50 |
| 20. | Injury experience and worktime data at nonmetal mines in the United States, 1931-77 | 51 |
| 21. | Injury experience and worktime data at nonmetal mills in the United States, 1955-77 | 52 |
| 22. | Injury experience and worktime data at stone quarries and mills in the United States, 1931-77 | 54 |
| 23. | Injury experience and worktime data at stone quarries in the United States, 1931-77 | 55 |
| 24. | Injury experience and worktime data at stone mills in the United States, 1931-77 | 56 |
| 25. | Injury experience and worktime data at sand and gravel plants in the United States, 1958-77 | 58 |
| 26. | Count of operations and average men working daily at metal, nonmetal, stone, and sand and gravel operations by general work location with summarized data, 1950-77 | 59 |
| 27. | Fatal and nonfatal disabling injuries and man-hours for metal, nonmetal, stone, and sand and gravel mines and mills combined with summarized data and injury-frequency rates, 1950-77 | 60 |
| 28. | Fatal and nonfatal disabling injuries and man-hours for all mining activities combined at metal, nonmetal, stone, and sand and gravel mines with summarized data and injury-frequency rates, 1950-77 | 61 |
| 29. | Fatal and nonfatal disabling injuries and man-hours for combined underground and associated surface workings at metal, nonmetal, and stone mines with summarized data and injury-frequency rates, 1950-77 | 62 |
| 30. | Fatal and nonfatal disabling injuries and man-hours for underground workings at metal, nonmetal, and stone mines with summarized data and injury-frequency rates, 1950-77 | 63 |
| 31. | Fatal and nonfatal disabling injuries and man-hours for associated surface workings at underground metal, nonmetal, and stone mines with summarized data and injury-frequency rates, 1950-77 | 64 |
| 32. | Fatal and nonfatal disabling injuries and man-hours for open pit and other surface workings at metal, nonmetal, stone, and sand and gravel mines with summarized data and injury-frequency rates, 1950-77 | 65 |

TABLES--Continued


| | | Page |
|---|---|---|
| 33. | Fatal and nonfatal disabling injuries and man-hours for metal, nonmetal, and stone mills with summarized data and frequency rates, 1950-77 | 66 |
| 34. | Injury experience and worktime data for officeworkers at metal operations, 1955-77 | 67 |
| 35. | Injury experience and worktime data for officeworkers at nonmetal operations, 1955-77 | 67 |
| 36. | Injury experience and worktime data for officeworkers at stone operations, 1955-77 | 68 |
| 37. | Injury experience and worktime data for officeworkers at sand and gravel operations, 1955-77 | 68 |
| 38. | Injury experience and worktime data for officeworkers at coal operations, 1964-77 | 69 |
| 39. | Injury experience and worktime data for officeworkers at coal, metal, nonmetal, stone, and sand and gravel operations, 1955-77 | 69 |

# SUMMARY OF SELECTED INJURY EXPERIENCE AND WORKTIME FOR THE MINING INDUSTRY IN THE UNITED STATES, 1931-77

by

Staff, Branch of Injury and Employment Information,

Health and Safety Analysis Center [1/]

## ABSTRACT

This Mine Safety and Health Administration (MSHA) informational report summarizes the principal injury experience and worktime measures of workers at U.S. mining and milling operations for the period 1931-77. These operations are divided into five categories: coal, metallic minerals, nonmetallic minerals (except stone and coal), stone, and sand and gravel. During that period, the injury-experience indices were based on one million man-hours of exposure.

## INTRODUCTION

As of January 1, 1978, rulemaking was adopted under 30 CFR, Part 50, to establish a common system of mandatory reporting and recordkeeping of injury and employment information for the mining industry in the United States; some procedural and coverage differences existed previously between the coal and noncoal sectors. At the same time, the computational base for determining injury frequency and severity was modified from a million man-hours to two hundred thousand employee-hours.

These changes were necessary to establish a closer similarity between the statistical measures for injury experience in mining and the injury experience in other United States industries. Injury experience statistics for all industries other than mining (and related ore-dressing and preparation) have been the responsibility of the Bureau of Labor Statistics, Department of Labor, since the Federal Occupational Safety and Health Act of 1970 (P.L. 91-596) became effective on April 28, 1971.

Adoption of the 200,000-hour base for measuring injury experience terminated a 47-year period during which the 1 million-hour base was consistently applied in the mining industry. However, all mining industries (Coal, Metal, Nonmetal, Stone, and Sand and Gravel) have never been grouped into a single publication. Because of this change, the period 1931 through 1977 provides an ideal time span over which to tabulate a summary of closely related and comparable information, but only principal categories of injury experience can be presented because of the broad time frame.

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1/ Technical Support, Denver, Colo.

## SCOPE OF STATISTICS

The compiled information is extracted from publications released by the United States Bureau of Mines, the Mining Enforcement and Safety Administration, and the Mine Safety and Health Administration. Limitations, restrictions, and exclusions in the data are detailed in appropriate footnotes on the tabulations insofar as possible, but some conditions require additional explanation which is presented here.

The Bureau of Mines was assigned responsibility at various times for collecting injury and employment data for mineral related industries not included in the mining industry and the information was published as part of the mineral industry statistics. However, those industries are not included in this publication. Such data on the coke industry and nonferrous smelters were reported in 1913 and discontinued with 1970. Data on the oil and gas industry were published in 1942 and discontinued with 1970. Data on the iron blast-furnace slag industry were published from 1958 through 1970.

Congressional and administrative actions and economic conditions have also had an effect on the continuity and content of the published injury and employment statistics. The tabulations may contain columns that are discontinuous or incomplete; these discrepancies usually result from a procedural change in data collection and ordinarily signify expanded or improved data collection and processing. For example, data concerning the workdays lost because of disabling injuries in coal mining were not collected until 1944. Information on coal dredges, culm banks (washeries), auger mines, and mechanical cleaning plants and breakers was included in the "surface" statistics until each was reported separately: dredges in 1936, culm banks in 1943, and auger mines in 1955. Plants for Pennsylvania anthracite are shown separately for the first time in 1957; and for bituminous coal in 1966. Independent shops and yards, previously included with the principal work location(s) of the mining establishment being served, were first reported separately in 1972.

Data concerning officeworkers were not published before 1955 and are not included in the tabulations. However, specific tables for officeworkers are presented at the end of the report.

## HISTORICAL TREATMENT OF INJURY EXPERIENCE IN MINING IN THE UNITED STATES

The Bureau of Mines was established in 1910 by the Organic Act of May 16, 1910 (30 U.S.C. 1-7) to make "investigations of the methods of mining, especially in relation to the safety of miners, and the appliances best adapted to prevent accidents, . . ." etc. Under the auspices of the Act, the Bureau assumed responsibility for mine-accident investigative work which was initiated by the Geological Survey in 1908 under Congressional authority.

Statistical data on injuries and related employment, from reports submitted voluntarily by operating mining companies in response to a Bureau of Mines canvass, first became available for 1911. The data base established as a result of the early reports was rather limited, requiring fairly extensive extrapolation of incomplete information.

From 1911 through 1914, the Bureau's classification of nonfatal injuries covered two groups: (1) "Serious" injuries, disabling a workman for more than 20 days; and (2) "slight" injuries, causing disability not exceeding 20 days but longer than the day on which the injury occurred. From 1915 through 1929, a "serious" injury, as the term was used in Bureau reports, signified a temporary injury disabling an employee for more than 14 days. Beginning in 1930, all nonfatal disabling injuries were classified by standard degrees of injury: Permanent total, permanent partial, and temporary total. Injuries classified as "nonfatal nondisabling" were reported beginning in 1972 for coal and 1973 for noncoal.

From 1911 through 1916, injury-frequency rates were indicated by showing the number of injuries per thousand men employed. Beginning in 1917 and continuing through 1930 (1929 for coal mining), a method was used whereby the total number of employees was converted to an equivalent number of 300-day workers, which was used to determine the injury rates per thousand 300-day workers.

Beginning in 1931 (1930 for coal mining), the Bureau of Mines collected and used the number of man-hours of exposure as the basis for determining injury-frequency rates. The injury-frequency rate per million man-hours worked constituted an index for comparing injury experience between different years, different mines, and different industries. The million man-hour base was used through 1977.

Man-hours of exposure were reported by coal producers for the first time in 1930; from 1930 through 1944, those hours represented worktime or face-time only, for underground employees. Since portal-to-portal hours were reported from 1945 on, the face-time hours reported from 1930 through 1944 were converted to portal-to-portal hours to be consistent with subsequent publications. See Bureau of Mines Bulletin 509, "Injury Experience in Coal Mining, 1948," page 5, for method used. Also, at this time, a number of Pennsylvania anthracite injuries were dropped that had previously been reported in publications; those injuries were reevaluated and determined to be nonreportable.

## DEFINITION OF TERMS

Disabling work injury.--Any injury suffered by a person that arises out of and in the course of employment and results in death, permanent total disability, permanent partial disability, or temporary total disability.

Disabling injury-frequency rate.--The number of work injuries per million man-hours of exposure, calculated by multiplying the total number of disabling work injuries by one million and dividing the product by the total man-hours of worktime.

Disabling injury-severity rate.--The number of days lost or charged from disabling work injuries per million man-hours of exposure. The rate is calculated by multiplying the total number of days lost or charged by one million and dividing the product by the total man-hours of worktime.

> Days lost.--The number of full calendar days the injured employee was unable to work as the result of a temporary total disability.
>
> Days charged.--All fatalities and permanent total disabilities have a standard time-loss charge of 6,000 days. Injuries resulting in permanent partial disability are assigned a time-loss charge depending upon the particular injury as specified in ANSI Z16.1.

Nondisabling work injury.--An injury suffered by a person that arises out of and in the course of employment and requires medical treatment in excess of first aid but does not result in a permanent disability or cause the person to stay away from work for one or more days. (Data not collected before 1972 for coal or before 1973 for noncoal.)

Nondisabling injury-frequency rate.--The number of nondisabling work injuries per million man-hours of exposure. It is calculated by multiplying the total number of nondisabling injuries by one million and dividing the product by the total man-hours of worktime. (Not available before 1972 for coal or before 1973 for noncoal.)

Average men working daily.--Average number of men at work during the time period(s) that mines or plants were active for production or development. It is computed for each mine or plant by summing the reported number of men working during each period of active operation and then dividing by the number of periods for which activity was reported.

Average days active.--The number of days in which the establishment was engaged in production or development work. Approximated by dividing the man-days worked by the average number of workers. (Not computed after 1971 for coal or after 1972 for noncoal.) The figure is not present on tabulations in which several industries are combined because it would be an unweighted average.

Man-days worked.--The average number of man-shifts reported as being worked during periods of active operations. Approximated by dividing the number of man-hours reported by the length of shift reported. (Not computed after 1971 for coal or after 1972 for noncoal.) The figure is not present on tabulations in which several industries are combined because it would be an unweighted average.

Underground operations.--Mine workings below the surface of the ground.

Surface at underground.--Includes associated shops and yards, also coal tipple at the mine portal or shaft collar. Also may be referred to as "associated surface workings."

Surface.--Open pit, strip, and quarry mines. Includes associated shops and yards at the mine.

Auger.--(Coal only) Surface mining done with a boring machine.

Culm bank or refuse pile.--(Coal only) Reworking of previously processed coal.

Dredge.--Mining underwater from a floating platform.

Independent shops and yards.--Shops and yards not associated with a specific mine. (Not reported separately before 1972 for coal or before 1973 for noncoal.)

Mill (or mechanical cleaning plant).--An establishment in which a mineral is processed by washing, screening, crushing, grinding, concentrating, or other means. Before 1961, mills in the metallic mineral industry were designated as "ore-dressing plants" and were included with metallurgical plants, which also encompassed nonferrous smelters, refineries, and reduction plants.

Officeworkers.--Persons working in the office at the mine or plant site.

TABLE 1. - Injury experience and exposure data at coal, metal, nonmetal, stone, and sand and gravel mines and mills in the United States, 1978-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average time within daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,192,148 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | 657,529 | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,061,144 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,113,057 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,304,034 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,142,509 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,142,122 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,155,211 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,144,566 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,382,871 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,445,465 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 1,415,429 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,441,505 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,284,573 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,227,521 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,340,565 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,302,760 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,051,024 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,111,960 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,117,067 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,009,223 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | 39.60 | 40.26 | [illegible] | NA | 40.26 | 3,982 | 1,423 | 5,405 | 534,814 | 937,276 |
| [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible]

Figure 1. - Injury-frequency rates, worktime, and production data for all coal operations in the United States, 1931-77

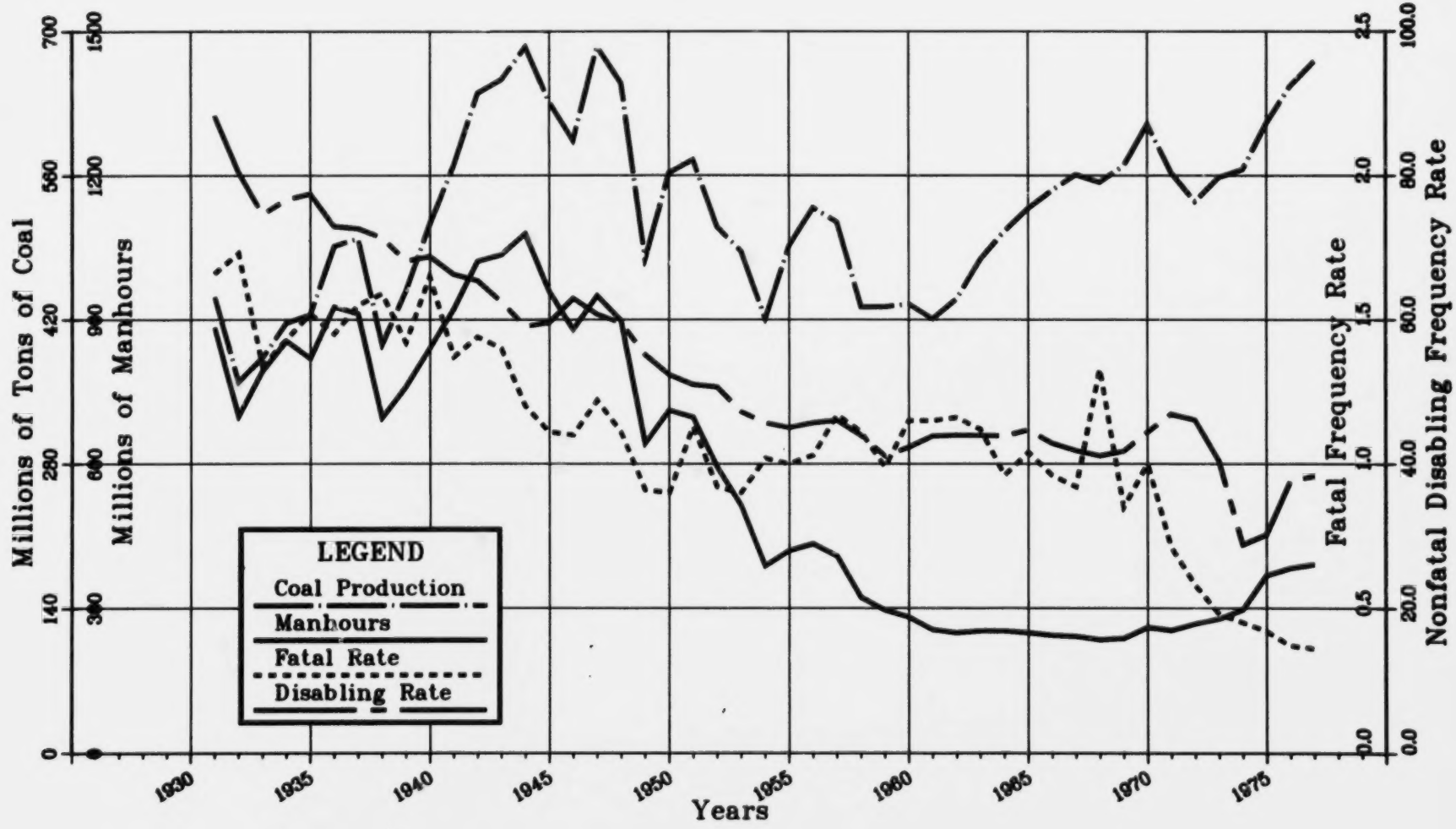

TABLE 2. - Injury experience, worktime, and production data at all coal mines in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) | Production, short tons (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | | |
| 1931 | 1,463 | [illegible] | 79,421 | NA | 79,421 | 1.66 | 88.26 | 89.92 | NA | 89.92 | 9,935 | NA | NA | 589,705 | 165 | [illegible] | [illegible] | 441,751 |
| 1932 | 1,207 | 56,283 | 57,490 | NA | 57,490 | 1.73 | 80.50 | 82.23 | NA | 82.23 | 10,359 | NA | NA | 527,623 | 149 | 78,745 | 694,125 | 359,565 |
| 1933 | 1,084 | 59,129 | 60,193 | NA | 60,193 | 1.34 | 74.58 | 75.92 | NA | 75.92 | 8,052 | NA | NA | 523,182 | 171 | 89,226 | 742,547 | 364,172 |
| 1934 | 1,226 | 65,559 | 66,785 | NA | 66,785 | 1.43 | 76.63 | 78.07 | NA | 78.07 | 8,599 | NA | NA | 566,426 | 184 | 103,940 | 855,487 | 418,536 |
| 1935 | 1,242 | 63,426 | 64,668 | NA | 64,668 | 1.52 | 77.43 | 78.95 | NA | 78.95 | 9,047 | NA | NA | 569,202 | 180 | 101,572 | 814,143 | 404,632 |
| 1936 | 1,342 | 67,540 | 68,882 | NA | 68,882 | 1.45 | 72.91 | 74.36 | NA | 74.36 | 8,693 | NA | NA | 584,582 | 197 | 114,891 | 926,305 | 461,139 |
| 1937 | 1,413 | 66,259 | 67,672 | NA | 67,672 | 1.55 | 72.62 | 74.17 | NA | 74.17 | 9,292 | NA | NA | 589,656 | 195 | 114,871 | 912,435 | 445,765 |
| 1938 | 1,105 | 49,636 | 50,741 | NA | 50,741 | 1.59 | 71.36 | 72.95 | NA | 72.95 | 9,531 | NA | NA | 541,528 | 163 | 88,276 | 697,599 | 345,647 |
| 1939 | 1,078 | 51,773 | 52,851 | NA | 52,851 | 1.42 | 68.12 | 69.54 | NA | 69.54 | 8,510 | NA | NA | 539,359 | 179 | 96,490 | 760,039 | 382,808 |
| 1940 | 1,388 | 57,776 | 59,164 | NA | 59,164 | 1.65 | 68.75 | 70.40 | NA | 70.40 | 9,909 | NA | NA | 533,267 | 199 | 106,239 | 841,416 | 412,808 |
| 1941 | 1,260 | 61,057 | 62,323 | NA | 62,323 | 1.37 | 66.26 | 67.63 | NA | 67.63 | 8,243 | NA | NA | 546,692 | 213 | 116,444 | 921,536 | 469,884 |
| 1942 | 1,471 | 66,774 | 68,245 | NA | 68,245 | 1.44 | 65.40 | 66.84 | NA | 66.84 | 8,644 | NA | NA | 530,561 | 243 | 129,136 | 1,021,078 | 540,021 |
| 1943 | 1,451 | 64,594 | 66,045 | NA | 66,045 | 1.40 | 62.44 | 63.84 | NA | 63.84 | 8,415 | NA | NA | 486,516 | 264 | 128,247 | 1,034,941 | 532,977 |
| 1944 | 1,249 | 63,691 | 64,989 | NA | 64,989 | 1.20 | 59.06 | 60.26 | NA | 60.26 | 7,221 | 2,134 | 9,355 | 453,937 | 281 | 127,500 | 1,027,474 | 554,450 |
| 1945 | 1,068 | 57,117 | 58,185 | NA | 58,185 | 1.11 | 59.58 | 60.70 | NA | 60.70 | 6,685 | 2,422 | 9,107 | 457,921 | 259 | 113,424 | 915,341 | 631,523 |
| 1946 | 968 | 55,350 | 56,318 | NA | 56,318 | 1.10 | 62.92 | 64.02 | NA | 64.02 | 6,603 | 2,486 | 9,089 | 463,079 | 224 | 103,647 | 836,628 | 593,476 |
| 1947 | 1,158 | 57,660 | 58,818 | NA | 58,818 | 1.22 | 60.72 | 61.94 | NA | 61.94 | 7,317 | 2,603 | 9,920 | 490,356 | 239 | 117,312 | 946,534 | 685,162 |
| 1948 | 999 | 53,472 | 54,471 | NA | 54,471 | 1.11 | 59.53 | 60.64 | NA | 60.64 | 6,673 | 2,686 | 9,359 | 507,333 | 227 | 115,083 | 928,231 | 650,003 |
| 1949 | 585 | 35,405 | 35,990 | NA | 35,990 | .91 | 55.11 | 56.02 | NA | 56.02 | 5,463 | 3,087 | 8,551 | 485,306 | 170 | 82,437 | 662,476 | 478,920 |
| 1950 | 643 | 37,264 | 37,907 | NA | 37,907 | .90 | 52.38 | 53.29 | NA | 53.29 | 5,423 | 2,814 | 8,237 | 483,239 | 189 | 91,231 | 731,390 | 562,305 |
| 1951 | 785 | 35,553 | 36,338 | NA | 36,338 | 1.13 | 50.99 | 52.12 | NA | 52.12 | 6,755 | 3,049 | 9,804 | 441,905 | 202 | 89,365 | 697,247 | 574,960 |
| 1952 | 548 | 30,074 | 30,622 | NA | 30,622 | .92 | 50.66 | 51.58 | NA | 51.58 | 5,538 | 2,896 | 8,434 | 401,529 | 189 | 76,003 | 595,698 | 509,967 |
| 1953 | 461 | 24,258 | 24,719 | NA | 24,719 | .90 | 47.23 | 48.13 | NA | 48.13 | 5,386 | 2,598 | 7,983 | 351,126 | 187 | 65,688 | 513,594 | 486,404 |
| 1954 | 396 | 17,718 | 18,114 | NA | 18,114 | 1.02 | 45.67 | 46.69 | NA | 46.69 | 6,124 | 2,578 | 8,703 | 283,705 | 175 | 49,598 | 387,450 | 420,885 |
| 1955 | 420 | 18,885 | 19,305 | NA | 19,305 | 1.00 | 45.03 | 46.03 | NA | 46.03 | 6,009 | 2,401 | 8,409 | 260,089 | 206 | 53,591 | 419,479 | 491,468 |
| 1956 | 448 | 19,816 | 20,264 | NA | 20,264 | 1.03 | 45.69 | 46.73 | NA | 46.73 | 6,198 | 2,268 | 8,466 | 260,255 | 212 | 55,286 | 433,662 | 525,447 |
| 1957 | 478 | 18,792 | 19,270 | NA | 19,270 | 1.17 | 46.04 | 47.21 | NA | 47.21 | 7,026 | 2,221 | 9,247 | 254,725 | 204 | 52,077 | 408,207 | 514,706 |
| 1958 | 358 | 14,160 | 14,518 | NA | 14,518 | 1.11 | 43.94 | 45.05 | NA | 45.05 | 6,666 | 2,768 | 9,434 | 224,890 | 183 | 41,121 | 322,229 | 432,196 |
| 1959 | 293 | 12,163 | 12,456 | NA | 12,456 | .99 | 41.09 | 42.08 | NA | 42.08 | 5,939 | 2,409 | 8,348 | 203,597 | 186 | 37,773 | 296,031 | 432,574 |
| 1960 | 325 | 11,902 | 12,227 | NA | 12,227 | 1.15 | 42.28 | 43.43 | NA | 43.43 | 6,926 | 2,449 | 9,376 | 189,679 | 189 | 35,778 | 281,528 | 435,036 |
| 1961 | 294 | 11,197 | 11,491 | NA | 11,491 | 1.15 | 43.86 | 45.01 | NA | 45.01 | 6,910 | 2,686 | 9,596 | 167,568 | 194 | 32,551 | 255,246 | 420,729 |
| 1962 | 289 | 10,944 | 11,233 | NA | 11,233 | 1.16 | 43.96 | 45.12 | NA | 45.12 | 6,965 | 2,722 | 9,688 | 161,286 | 197 | 31,716 | 248,946 | 439,972 |
| 1963 | 284 | 11,133 | 11,417 | NA | 11,417 | 1.12 | 43.97 | 45.09 | NA | 45.09 | 6,730 | 2,398 | 9,128 | 157,126 | 205 | 32,200 | 253,185 | 478,629 |
| 1964 | 242 | 11,070 | 11,312 | NA | 11,312 | .96 | 43.86 | 44.82 | NA | 44.82 | 5,753 | 2,668 | 8,420 | 150,761 | 212 | 32,012 | 254,405 | 505,573 |
| 1965 | 259 | 11,138 | 11,397 | NA | 11,397 | 1.04 | 44.73 | 45.77 | NA | 45.77 | 6,241 | 2,718 | 8,960 | 148,734 | 212 | 31,513 | 248,988 | 527,993 |
| 1966 | 233 | 10,446 | 10,679 | NA | 10,679 | .96 | 42.85 | 43.81 | NA | 43.81 | 5,735 | 1,973 | 7,708 | 145,244 | 212 | 30,811 | 243,759 | 545,464 |
| 1967 | 222 | 10,115 | 10,337 | NA | 10,337 | .92 | 41.84 | 42.75 | NA | 42.75 | 5,509 | 2,190 | 7,699 | 139,312 | 220 | 30,611 | 241,774 | 560,764 |
| 1968 | 311 | 9,639 | 9,950 | NA | 9,950 | 1.33 | 41.12 | 42.45 | NA | 42.45 | 7,960 | 2,553 | 10,513 | 134,467 | 221 | 29,651 | 234,417 | 553,340 |
| 1969 | 203 | 9,917 | 10,120 | NA | 10,120 | .85 | 41.76 | 42.61 | NA | 42.61 | 5,129 | 2,230 | 7,359 | 133,302 | 225 | 30,053 | 237,454 | 569,182 |
| 1970 | 260 | 11,552 | 11,812 | NA | 11,812 | 1.00 | 44.40 | 45.40 | NA | 45.40 | 5,996 | 2,312 | 8,308 | 144,480 | 227 | 32,814 | 260,169 | 609,803 |
| 1971 | 181 | 11,916 | 12,097 | NA | 12,097 | .71 | 46.89 | 47.60 | NA | 47.60 | 4,273 | 1,140 | 5,413 | 142,108 | 226 | 32,099 | 254,135 | 562,720 |
| 1972 | 156 | 12,329 | 12,485 | 16,090 | 28,575 | .58 | 46.08 | 46.66 | 60.14 | 106.80 | 3,498 | 1,911 | 5,409 | 162,207 | NA | NA | 267,550 | 534,586 |
| 1973 | 132 | 11,220 | 11,352 | 14,491 | 25,843 | .48 | 40.41 | 40.89 | 52.20 | 93.09 | 2,853 | 1,960 | 4,813 | 147,243 | NA | NA | 277,622 | 557,949 |
| 1974 | 133 | 8,545 | 8,678 | 7,267 | 15,945 | .5 | 28.79 | 29.24 | 24.49 | 53.73 | 2,689 | 1,940 | 4,629 | 176,997 | NA | NA | 296,775 | 565,774 |
| 1975 | 155 | 11,107 | 11,262 | 9,641 | 20,903 | .42 | 30.17 | 30.59 | 26.18 | 56.77 | 2,526 | 1,778 | 4,304 | 218,162 | NA | NA | 369,197 | 611,130 |
| 1976 | 141 | 14,389 | 14,530 | 12,768 | 27,298 | .37 | 37.55 | 37.92 | 33.32 | 71.24 | 2,208 | 1,750 | 3,958 | 214,632 | NA | NA | 383,158 | 647,087 |
| 1977 | 139 | 14,989 | 15,128 | 10,067 | 25,195 | .36 | 38.37 | 38.73 | 25.77 | 64.50 | 2,135 | 2,923 | 5,058 | 230,469 | NA | NA | 390,620 | 670,684 |

NA Not available.

TABLE 2A. - Injury experience, worktime, and production data at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) | Production, short tons (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | | |
| 1931 | 183 | 23,483 | 23,666 | NA | 23,666 | 1.84 | 115.07 | 116.91 | NA | 116.91 | 11,026 | NA | NA | 139,431 | 186 | 25,915 | 208,415 | 59,646 |
| 1932 | 147 | 16,931 | 17,150 | NA | 17,150 | 1.59 | 107.88 | 109.47 | NA | 109.47 | 9,519 | NA | NA | 121,243 | 161 | 19,486 | 156,944 | 49,855 |
| 1933 | 131 | 13,183 | 13,414 | NA | 13,414 | 1.49 | 98.13 | 99.62 | NA | 99.62 | 8,958 | NA | NA | 104,430 | 185 | 19,344 | 154,723 | 49,541 |
| 1934 | 204 | 15,641 | 15,845 | NA | 15,845 | 1.50 | 104.15 | 105.65 | NA | 105.65 | 9,015 | NA | NA | 108,382 | 206 | 22,292 | 178,372 | 57,168 |
| 1935 | 204 | 15,897 | 16,171 | NA | 16,171 | 1.78 | 103.16 | 104.94 | NA | 104.94 | 10,669 | NA | NA | 102,848 | 187 | 19,280 | 154,096 | 52,263 |
| 1936 | 188 | 17,032 | 17,270 | NA | 17,270 | 1.56 | 108.80 | 110.36 | NA | 110.36 | 9,355 | NA | NA | 102,082 | 192 | 19,630 | 156,486 | 54,670 |
| 1937 | 215 | 13,412 | 13,627 | NA | 13,627 | 1.58 | 98.72 | 100.31 | NA | 100.31 | 9,495 | NA | NA | 99,085 | 189 | 18,741 | 135,854 | 51,745 |
| 1938 | 220 | 12,842 | 13,062 | NA | 13,062 | 1.94 | 110.85 | 112.79 | NA | 112.79 | 11,653 | NA | NA | 96,282 | 172 | 16,528 | 115,852 | 46,149 |
| 1939 | 211 | 13,229 | 13,440 | NA | 13,440 | 1.71 | 107.37 | 109.08 | NA | 109.08 | 10,275 | NA | NA | 94,331 | 186 | 17,524 | 123,211 | 51,346 |
| 1940 | 194 | 13,762 | 13,956 | NA | 13,956 | 1.50 | 112.55 | 114.06 | NA | 114.06 | 9,016 | NA | NA | 92,420 | 189 | 17,468 | 122,447 | 51,489 |
| 1941 | 174 | 14,420 | 14,614 | NA | 14,614 | 1.49 | 110.83 | 112.32 | NA | 112.32 | 8,946 | NA | NA | 88,948 | 207 | 18,444 | 130,107 | 54,115 |
| 1942 | 158 | 13,881 | 14,807 | NA | 14,807 | 1.64 | 98.73 | 100.37 | NA | 100.37 | 9,858 | NA | NA | 82,064 | 239 | 19,644 | 137,560 | 58,316 |
| 1943 | 226 | 13,537 | 13,763 | NA | 13,763 | 1.50 | 89.68 | 91.18 | NA | 91.18 | 8,990 | NA | NA | 79,381 | 269 | 21,385 | 150,832 | 59,506 |
| 1944 | 174 | 12,438 | 12,612 | NA | 12,612 | 1.06 | 76.05 | 77.11 | NA | 77.11 | 6,383 | 1,776 | 8,159 | 77,734 | 293 | 22,805 | 163,549 | 63,592 |
| 1945 | 148 | 10,923 | 11,066 | NA | 11,066 | 1.01 | 77.32 | 78.33 | NA | 78.33 | 6,073 | 1,990 | 8,064 | 72,924 | 268 | 19,569 | 141,275 | 54,999 |
| 1946 | 173 | 12,533 | 12,706 | NA | 12,706 | 1.14 | 82.65 | 83.79 | NA | 83.79 | 6,845 | 2,171 | 9,016 | 77,937 | 269 | 20,997 | 151,633 | 60,456 |
| 1947 | 178 | 11,630 | 11,808 | NA | 11,808 | 1.18 | 79.41 | 80.59 | NA | 80.59 | 7,084 | 2,132 | 9,216 | 78,511 | 257 | 20,207 | 146,523 | 57,128 |
| 1948 | 137 | 11,394 | 11,531 | NA | 11,531 | .91 | 75.69 | 76.60 | NA | 76.60 | 5,460 | 2,685 | 8,145 | 77,955 | 263 | 20,508 | 150,545 | 57,080 |
| 1949 | 91 | 7,904 | 7,995 | NA | 7,995 | .83 | 71.88 | 72.71 | NA | 72.71 | 4,995 | 2,388 | 7,383 | 75,875 | 196 | 14,885 | 109,310 | 43,201 |
| 1950 | 93 | 8,274 | 8,367 | NA | 8,367 | .80 | 76.14 | 76.93 | NA | 76.93 | 4,787 | 2,495 | 7,283 | 74,616 | 211 | 15,721 | 116,556 | 44,426 |
| 1951 | 103 | 7,470 | 7,573 | NA | 7,573 | .95 | 69.94 | 70.88 | NA | 70.88 | 5,672 | 2,787 | 8,459 | 69,767 | 207 | 14,467 | 106,841 | 41,828 |
| 1952 | 113 | 6,458 | 6,454 | NA | 6,454 | 1.03 | 66.35 | 67.38 | NA | 67.38 | 6,201 | 2,369 | 8,571 | 62,610 | 207 | 12,975 | 95,784 | 40,595 |
| 1953 | 84 | 4,126 | 4,210 | NA | 4,210 | .92 | 59.85 | 60.77 | NA | 60.77 | 5,543 | 2,064 | 7,607 | 55,701 | 169 | 9,394 | 69,275 | 30,518 |
| 1954 | 62 | 2,972 | 3,034 | NA | 3,034 | 1.23 | 59.18 | 60.41 | NA | 60.41 | 7,407 | 2,664 | 10,071 | 41,786 | 164 | 6,832 | 50,223 | 28,933 |
| 1955 | 60 | 2,919 | 2,979 | NA | 2,979 | 1.30 | 63.46 | 64.77 | NA | 64.77 | 7,827 | 2,423 | 10,250 | 34,550 | 182 | 6,285 | 45,995 | 28,948 |
| 1956 | 56 | 3,330 | 3,386 | NA | 3,386 | 1.12 | 66.31 | 67.42 | NA | 67.42 | 6,691 | 2,818 | 9,508 | 32,507 | 212 | 6,893 | 50,220 | 32,216 |
| 1957 | 51 | 2,877 | 2,928 | NA | 2,928 | 1.15 | 64.93 | 66.08 | NA | 66.08 | 6,906 | 2,420 | 9,326 | 30,825 | 196 | 6,057 | 44,311 | 25,530 |
| 1958 | 42 | 2,114 | 2,156 | NA | 2,156 | .90 | 59.88 | 60.78 | NA | 60.78 | 5,413 | 2,303 | 7,716 | 26,540 | 183 | 4,861 | 35,471 | 21,260 |
| 1959 | 42 | 1,728 | 1,770 | NA | 1,770 | 1.60 | 58.66 | 60.26 | NA | 60.26 | 9,601 | 2,081 | 11,682 | 23,294 | 173 | 4,036 | 29,371 | 20,496 |
| 1960 | 35 | 1,401 | 1,436 | NA | 1,436 | 1.43 | 57.30 | 58.73 | NA | 58.73 | 8,588 | 1,897 | 10,485 | 19,051 | 176 | 3,360 | 24,452 | 18,938 |
| 1961 | 19 | 1,295 | 1,314 | NA | 1,314 | .85 | 57.75 | 58.60 | NA | 58.60 | 5,084 | 2,618 | 7,702 | 15,792 | 196 | 3,098 | 22,424 | 17,507 |
| 1962 | 26 | 1,161 | 1,187 | NA | 1,187 | 1.26 | 56.14 | 57.40 | NA | 57.40 | 7,544 | 1,877 | 9,421 | 14,010 | 204 | 2,853 | 20,680 | 17,133 |
| 1963 | 32 | 1,295 | 1,327 | NA | 1,327 | 1.52 | 61.53 | 63.05 | NA | 63.05 | 9,122 | 3,245 | 12,367 | 13,498 | 216 | 2,912 | 21,048 | 18,344 |
| 1964 | 24 | 1,342 | 1,366 | NA | 1,366 | 1.15 | 65.89 | 67.07 | NA | 67.07 | 7,070 | 2,580 | 9,650 | 13,144 | 214 | 2,812 | 20,368 | 17,487 |
| 1965 | 8 | 1,067 | 1,075 | NA | 1,075 | .49 | 65.16 | 65.65 | NA | 65.65 | 2,931 | 2,004 | 4,936 | 11,132 | 204 | 2,271 | 16,375 | 14,909 |
| 1966 | 5 | 829 | 834 | NA | 834 | .44 | 60.64 | 61.07 | NA | 61.07 | 2,633 | 1,844 | 4,477 | 9,292 | 203 | 1,883 | 13,672 | 12,905 |
| 1967 | 9 | 609 | 618 | NA | 618 | .73 | 49.27 | 50.00 | NA | 50.00 | 4,369 | 1,142 | 5,511 | 7,750 | 219 | 1,701 | 12,359 | 12,262 |
| 1968 | 4 | 504 | 508 | NA | 508 | .36 | 45.77 | 46.13 | NA | 46.13 | 2,180 | 2,002 | 4,182 | 6,932 | 217 | 1,508 | 11,011 | 11,492 |
| 1969 | 13 | 492 | 505 | NA | 505 | 1.29 | 48.85 | 50.14 | NA | 50.14 | 7,744 | 1,347 | 9,090 | 5,927 | 232 | 1,377 | 10,073 | 10,251 |
| 1970 | 5 | 503 | 508 | NA | 508 | .49 | 49.20 | 49.69 | NA | 49.69 | 2,934 | 1,663 | 4,598 | 5,938 | 234 | 1,392 | 10,224 | 9,885 |
| 1971 | 5 | 553 | 558 | NA | 558 | .54 | 59.37 | 59.90 | NA | 59.90 | 3,221 | 691 | 3,912 | 5,028 | 250 | 1,259 | 9,315 | 8,727 |
| 1972 | 8 | 317 | 320 | 390 | 710 | .48 | 51.03 | 51.52 | 62.79 | 114.30 | 2,898 | 2,709 | 5,606 | 4,922 | NA | NA | 6,212 | 6,493 |
| 1973 | 1 | 340 | 341 | 492 | 833 | .17 | 56.24 | 56.40 | 81.38 | 137.78 | 992 | 1,698 | 2,690 | 3,357 | NA | NA | 6,046 | 6,467 |
| 1974 | 2 | 247 | 249 | 372 | 621 | .39 | 48.40 | 48.79 | 72.89 | 121.68 | 2,351 | 1,568 | 3,919 | 3,409 | NA | NA | 5,103 | 4,934 |
| 1975 | 2 | 251 | 253 | 456 | 709 | .40 | 50.74 | 51.15 | 92.18 | 143.33 | 2,426 | 1,782 | 4,208 | 3,158 | NA | NA | 4,947 | 5,123 |
| 1976 | 1 | 293 | 294 | 435 | 729 | .19 | 56.64 | 56.84 | 84.10 | 140.93 | 1,160 | 2,463 | 3,623 | 3,161 | NA | NA | 5,173 | 5,395 |
| 1977 | 11 | 289 | 300 | 296 | 596 | 2.12 | 55.72 | 57.84 | 57.07 | 114.91 | 12,725 | 4,569 | 17,295 | 3,150 | NA | NA | 5,186 | 5,270 |

NA Not available.

TABLE 2B. - Injury experience, worktime, and production data at bituminous coal mines in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) | Production, short tons (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | | |
| 1931 | 1,080 | 53,975 | 55,055 | NA | 55,055 | 1.60 | 79.98 | 81.58 | NA | 81.58 | 9,602 | NA | NA | 490,274 | 163 | 73,349 | 674,871 | 382,105 |
| 1932 | 958 | 39,352 | 40,310 | NA | 40,310 | 1.77 | 72.58 | 74.35 | NA | 74.35 | 10,602 | NA | NA | 406,380 | 146 | 59,260 | 542,181 | 309,710 |
| 1933 | 833 | 43,946 | 44,779 | NA | 44,779 | 1.31 | 68.87 | 70.17 | NA | 70.17 | 7,832 | NA | NA | 418,752 | 167 | 69,882 | 639,124 | 333,631 |
| 1934 | 958 | 46,982 | 47,940 | NA | 47,940 | 1.41 | 69.39 | 70.80 | NA | 70.80 | 8,488 | NA | NA | 458,044 | 174 | 81,648 | 677,115 | 359,368 |
| 1935 | 968 | 47,529 | 48,497 | NA | 48,497 | 1.46 | 71.47 | 72.92 | NA | 72.92 | 8,733 | NA | NA | 482,354 | 178 | 82,292 | 665,047 | 372,369 |
| 1936 | 1,048 | 50,514 | 51,612 | NA | 51,612 | 1.43 | 65.62 | 67.04 | NA | 67.04 | 8,556 | NA | NA | 482,500 | 197 | 95,262 | 769,819 | 436,468 |
| 1937 | 1,198 | 52,847 | 54,045 | NA | 54,045 | 1.54 | 68.05 | 69.59 | NA | 69.59 | 9,256 | NA | NA | 490,771 | 196 | 96,130 | 776,781 | 467,047 |
| 1938 | 880 | 36,794 | 37,674 | NA | 37,674 | 1.52 | 63.47 | 64.98 | NA | 64.98 | 9,107 | NA | NA | 446,246 | 161 | 71,747 | 579,747 | 349,548 |
| 1939 | 867 | 38,544 | 39,411 | NA | 39,411 | 1.36 | 60.52 | 61.89 | NA | 61.89 | 8,169 | NA | NA | 448,044 | 177 | 78,966 | 636,928 | 396,631 |
| 1940 | 1,204 | 43,994 | 45,198 | NA | 45,198 | 1.68 | 61.28 | 62.95 | NA | 62.95 | 10,062 | NA | NA | 440,847 | 201 | 88,771 | 717,469 | 461,319 |
| 1941 | 1,072 | 46,637 | 47,709 | NA | 47,709 | 1.35 | 58.93 | 60.28 | NA | 60.28 | 8,127 | NA | NA | 457,744 | 214 | 98,060 | 791,429 | 511,769 |
| 1942 | 1,245 | 53,193 | 54,438 | NA | 54,438 | 1.41 | 60.21 | 61.62 | NA | 61.62 | 8,455 | NA | NA | 448,797 | 244 | 109,491 | 891,515 | 581,705 |
| 1943 | 1,225 | 51,067 | 52,292 | NA | 52,292 | 1.39 | 57.79 | 59.17 | NA | 59.17 | 8,317 | NA | NA | 487,135 | 263 | 128,912 | 1,051,909 | 598,471 |
| 1944 | 1,124 | 51,253 | 52,377 | NA | 52,377 | 1.23 | 56.02 | 57.25 | NA | 57.25 | 7,311 | 2,198 | 9,509 | 378,203 | 274 | 104,695 | 914,925 | 621,358 |
| 1945 | 925 | 46,194 | 47,119 | NA | 47,119 | 1.13 | 56.52 | 57.65 | NA | 57.65 | 6,791 | 2,497 | 9,288 | 384,997 | 257 | 93,454 | 817,318 | 576,525 |
| 1946 | 795 | 42,817 | 43,612 | NA | 43,612 | 1.09 | 58.81 | 59.91 | NA | 59.91 | 6,552 | 2,552 | 9,104 | 385,142 | 215 | 82,850 | 727,995 | 533,320 |
| 1947 | 985 | 46,025 | 47,010 | NA | 47,010 | 1.23 | 57.32 | 58.54 | NA | 58.54 | 7,360 | 2,889 | 10,249 | 411,845 | 236 | 97,105 | 803,018 | 628,034 |
| 1948 | 862 | 42,078 | 42,940 | NA | 42,940 | 1.15 | 56.28 | 57.43 | NA | 57.43 | 6,917 | 2,687 | 9,604 | 429,374 | 220 | 94,575 | 747,866 | 592,923 |
| 1949 | 494 | 27,548 | 28,042 | NA | 28,042 | .93 | 51.67 | 52.60 | NA | 52.60 | 5,559 | 3,231 | 8,790 | 409,431 | 165 | 67,592 | 533,166 | 435,719 |
| 1950 | 550 | 28,390 | 28,940 | NA | 28,940 | .92 | 47.73 | 48.65 | NA | 48.65 | 5,564 | 2,876 | 8,424 | 408,623 | 185 | 75,510 | 594,838 | 513,679 |
| 1951 | 684 | 28,081 | 28,765 | NA | 28,765 | 1.16 | 47.56 | 48.72 | NA | 48.72 | 6,951 | 3,097 | 10,048 | 372,134 | 201 | 74,868 | 590,405 | 533,132 |
| 1952 | 449 | 23,719 | 24,168 | NA | 24,168 | .90 | 47.64 | 48.54 | NA | 48.54 | 5,411 | 2,998 | 8,409 | 338,719 | 186 | 63,028 | 497,914 | 469,573 |
| 1953 | 397 | 20,112 | 20,509 | NA | 20,509 | .89 | 45.26 | 46.16 | NA | 46.16 | 5,361 | 2,681 | 8,042 | 295,425 | 191 | 56,294 | 444,319 | 435,885 |
| 1954 | 334 | 14,746 | 15,080 | NA | 15,080 | .99 | 43.66 | 44.65 | NA | 44.65 | 5,936 | 2,566 | 8,499 | 241,919 | 177 | 42,765 | 337,727 | 391,952 |
| 1955 | 360 | 15,966 | 16,326 | NA | 16,326 | .96 | 42.76 | 43.72 | NA | 43.72 | 5,765 | 2,344 | 8,143 | 225,539 | 210 | 47,308 | 373,344 | 462,519 |
| 1956 | 392 | 16,486 | 16,878 | NA | 16,878 | 1.02 | 42.99 | 44.02 | NA | 44.02 | 6,134 | 2,196 | 8,330 | 227,774 | 212 | 48,342 | 383,442 | 496,231 |
| 1957 | 427 | 15,915 | 16,342 | NA | 16,342 | 1.17 | 43.74 | 44.91 | NA | 44.91 | 7,040 | 2,197 | 9,237 | 223,900 | 206 | 46,020 | 363,896 | 494,175 |
| 1958 | 326 | 12,036 | 12,362 | NA | 12,362 | 1.14 | 41.97 | 43.11 | NA | 43.11 | 6,421 | 2,425 | 8,846 | 198,350 | 183 | 36,260 | 286,754 | 410,936 |
| 1959 | 246 | 10,440 | 10,686 | NA | 10,686 | .92 | 39.15 | 40.07 | NA | 40.07 | 5,535 | 2,446 | 7,981 | 180,303 | 187 | 33,734 | 266,660 | 412,078 |
| 1960 | 290 | 10,501 | 10,791 | NA | 10,791 | 1.13 | 40.85 | 41.98 | NA | 41.98 | 6,764 | 2,502 | 9,270 | 170,624 | 190 | 32,417 | 257,075 | 416,098 |
| 1961 | 275 | 9,902 | 10,177 | NA | 10,177 | 1.18 | 42.52 | 43.70 | NA | 43.70 | 7,045 | 2,692 | 9,738 | 151,776 | 196 | 29,453 | 232,871 | 403,222 |
| 1962 | 263 | 9,783 | 10,046 | NA | 10,046 | 1.15 | 42.86 | 44.01 | NA | 44.01 | 6,813 | 2,799 | 9,712 | 147,276 | 196 | 28,663 | 226,267 | 422,838 |
| 1963 | 252 | 9,838 | 10,090 | NA | 10,090 | 1.09 | 42.35 | 43.47 | NA | 43.47 | 6,513 | 2,321 | 8,834 | 143,628 | 204 | 29,289 | 232,136 | 460,255 |
| 1964 | 218 | 9,728 | 9,946 | NA | 9,946 | .94 | 41.92 | 42.86 | NA | 42.86 | 5,637 | 2,675 | 8,312 | 137,617 | 212 | 29,200 | 232,037 | 488,086 |
| 1965 | 251 | 10,071 | 10,322 | NA | 10,322 | 1.08 | 43.30 | 44.37 | NA | 44.37 | 6,674 | 2,769 | 9,243 | 137,602 | 213 | 29,242 | 232,613 | 513,043 |
| 1966 | 227 | 9,617 | 9,844 | NA | 9,844 | .99 | 41.80 | 42.78 | NA | 42.78 | 5,919 | 1,981 | 7,900 | 135,952 | 213 | 28,928 | 230,087 | 532,559 |
| 1967 | 213 | 9,506 | 9,719 | NA | 9,719 | .93 | 41.44 | 42.36 | NA | 42.36 | 5,571 | 2,247 | 7,817 | 131,562 | 220 | 28,910 | 229,415 | 568,503 |
| 1968 | 307 | 9,135 | 9,442 | NA | 9,442 | 1.37 | 40.89 | 42.26 | NA | 42.26 | 8,245 | 2,580 | 10,825 | 127,535 | 221 | 28,144 | 223,406 | 541,849 |
| 1969 | 190 | 9,425 | 9,615 | NA | 9,615 | .84 | 41.44 | 42.28 | NA | 42.28 | 5,013 | 2,269 | 7,282 | 127,375 | 225 | 28,677 | 227,411 | 558,931 |
| 1970 | 255 | 11,049 | 11,304 | NA | 11,304 | 1.02 | 44.21 | 45.23 | NA | 45.23 | 6,121 | 2,339 | 8,460 | 138,542 | 227 | 31,423 | 249,945 | 599,918 |
| 1971 | 176 | 11,363 | 11,539 | NA | 11,539 | .72 | 46.41 | 47.13 | NA | 47.13 | 4,313 | 1,157 | 5,470 | 137,080 | 225 | 30,834 | 244,820 | 553,993 |
| 1972 | 153 | 12,012 | 12,165 | 15,700 | 27,865 | .59 | 45.96 | 46.55 | 60.08 | 106.62 | 3,513 | 1,892 | 5,405 | 157,285 | NA | NA | 281,338 | 524,093 |
| 1973 | 131 | 10,880 | 11,011 | 13,999 | 25,010 | .48 | 40.06 | 40.54 | 51.55 | 92.09 | 2,494 | 1,966 | 4,460 | 143,686 | NA | NA | 271,575 | 551,482 |
| 1974 | 131 | 8,298 | 8,429 | 6,895 | 15,324 | .45 | 28.45 | 28.90 | 23.64 | 52.54 | 2,695 | 1,946 | 4,641 | 173,588 | NA | NA | 291,672 | 580,840 |
| 1975 | 153 | 10,856 | 11,009 | 9,185 | 20,194 | .42 | 29.89 | 30.31 | 25.29 | 55.59 | 2,527 | 1,778 | 4,306 | 215,004 | NA | NA | 363,250 | 606,007 |
| 1976 | 140 | 14,096 | 14,236 | 12,333 | 26,569 | .37 | 37.29 | 37.66 | 32.63 | 70.29 | 2,222 | 1,740 | 3,962 | 211,471 | NA | NA | 377,985 | 641,692 |
| 1977 | 128 | 14,700 | 14,828 | 9,771 | 24,599 | .33 | 38.14 | 38.47 | 25.35 | 63.82 | 1,993 | 2,901 | 4,893 | 227,319 | NA | NA | 385,434 | 665,413 |

NA Not available.

TABLE 3. - Number of fatal injuries, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931---- | 1,378 | 78 | 1,456 | 7 | NA | NA | NA | 7 | 1,463 | NA | NA | 1,463 |
| 1932---- | 1,130 | 62 | 1,192 | 15 | NA | NA | NA | 15 | 1,207 | NA | NA | 1,207 |
| 1933---- | 976 | 75 | 1,051 | 13 | NA | NA | NA | 13 | 1,064 | NA | NA | 1,064 |
| 1934---- | 1,132 | 82 | 1,214 | 12 | NA | NA | NA | 12 | 1,226 | NA | NA | 1,226 |
| 1935---- | 1,144 | 72 | 1,216 | 26 | NA | NA | NA | 26 | 1,242 | NA | NA | 1,242 |
| 1936---- | 1,256 | 63 | 1,319 | 23 | NA | NA | - | 23 | 1,342 | NA | NA | 1,342 |
| 1937---- | 1,318 | 81 | 1,399 | 14 | NA | NA | - | 14 | 1,413 | NA | NA | 1,413 |
| 1938---- | 1,027 | 50 | 1,077 | 28 | NA | NA | - | 28 | 1,105 | NA | NA | 1,105 |
| 1939---- | 1,014 | 48 | 1,062 | 16 | NA | NA | - | 16 | 1,078 | NA | NA | 1,078 |
| 1940---- | 1,308 | 53 | 1,361 | 27 | NA | NA | - | 27 | 1,388 | NA | NA | 1,388 |
| 1941---- | 1,166 | 60 | 1,226 | 40 | NA | NA | - | 40 | 1,266 | NA | NA | 1,266 |
| 1942---- | 1,353 | 83 | 1,436 | 35 | NA | NA | - | 35 | 1,471 | NA | NA | 1,471 |
| 1943---- | 1,327 | 80 | 1,407 | 39 | NA | 5 | - | 44 | 1,451 | NA | NA | 1,451 |
| 1944---- | 1,166 | 75 | 1,241 | 55 | NA | 2 | - | 57 | 1,298 | NA | NA | 1,298 |
| 1945---- | 960 | 69 | 1,029 | 39 | NA | - | - | 39 | 1,068 | NA | NA | 1,068 |
| 1946---- | 863 | 63 | 926 | 41 | NA | 1 | - | 42 | 968 | NA | NA | 968 |
| 1947---- | 1,047 | 59 | 1,106 | 52 | NA | - | - | 52 | 1,158 | NA | NA | 1,158 |
| 1948---- | 880 | 55 | 935 | 63 | NA | 1 | - | 64 | 999 | NA | NA | 999 |
| 1949---- | 508 | 52 | 560 | 25 | NA | - | - | 25 | 585 | NA | NA | 585 |
| 1950---- | 547 | 55 | 602 | 39 | NA | 2 | - | 41 | 643 | NA | NA | 643 |
| 1951---- | 707 | 44 | 751 | 34 | NA | - | - | 34 | 785 | NA | NA | 785 |
| 1952---- | 474 | 40 | 514 | 33 | NA | 1 | - | 34 | 548 | NA | NA | 548 |
| 1953---- | 409 | 31 | 440 | 21 | NA | - | - | 21 | 461 | NA | NA | 461 |
| 1954---- | 342 | 32 | 374 | 22 | NA | - | - | 22 | 396 | NA | NA | 396 |
| 1955---- | 352 | 39 | 391 | 25 | 3 | 1 | - | 29 | 420 | NA | NA | 420 |
| 1956---- | 390 | 27 | 417 | 28 | 2 | 1 | - | 31 | 448 | NA | NA | 448 |
| 1957---- | 424 | 27 | 451 | 22 | 3 | - | - | 25 | 476 | NA | 2 | 478 |
| 1958---- | 315 | 19 | 334 | 19 | 3 | - | - | 22 | 356 | NA | 2 | 358 |
| 1959---- | 251 | 17 | 268 | 20 | - | - | 1 | 21 | 289 | NA | 4 | 293 |
| 1960---- | 274 | 21 | 295 | 24 | 3 | 1 | - | 28 | 323 | NA | 2 | 325 |
| 1961---- | 256 | 19 | 275 | 17 | 1 | - | - | 18 | 293 | NA | 1 | 294 |
| 1962---- | 244 | 21 | 265 | 20 | 1 | - | - | 21 | 286 | NA | 3 | 289 |
| 1963---- | 245 | 12 | 257 | 22 | 3 | 1 | - | 26 | 283 | NA | 1 | 284 |
| 1964---- | 210 | 14 | 224 | 15 | 1 | - | - | 16 | 240 | NA | 2 | 242 |
| 1965---- | 223 | 17 | 240 | 18 | 1 | - | - | 19 | 259 | NA | - | 259 |
| 1966---- | 194 | 8 | 202 | 23 | 3 | - | - | 26 | 228 | NA | 5 | 233 |
| 1967---- | 174 | 12 | 186 | 22 | 2 | - | - | 24 | 210 | NA | 12 | 222 |
| 1968---- | 268 | 8 | 276 | 24 | 6 | - | - | 30 | 306 | NA | 5 | 311 |
| 1969---- | 149 | 14 | 163 | 28 | 3 | - | - | 31 | 194 | NA | 9 | 203 |
| 1970---- | 206 | 14 | 220 | 29 | 4 | - | - | 33 | 253 | NA | 7 | 260 |
| 1971---- | 141 | 8 | 149 | 23 | 3 | - | - | 26 | 175 | NA | 6 | 181 |
| 1972---- | 122 | 6 | 128 | 20 | 1 | - | - | 21 | 149 | - | 7 | 156 |
| 1973---- | 99 | 6 | 105 | 16 | 1 | - | - | 17 | 122 | 2 | 8 | 132 |
| 1974---- | 90 | 7 | 97 | 24 | 2 | - | - | 26 | 123 | - | 10 | 133 |
| 1975---- | 99 | 12 | 111 | 32 | 3 | - | - | 35 | 146 | - | 9 | 155 |
| 1976---- | 104 | 5 | 109 | 23 | 1 | - | - | 24 | 133 | - | 8 | 141 |
| 1977---- | 91 | 9 | 100 | 27 | 2 | - | - | 29 | 129 | 1 | 9 | 139 |

NA Not available.

TABLE 3A. - Number of fatal injuries, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931----- | 352 | 26 | 378 | 5 | | NA | NA | 5 | 383 | NA | NA | 383 |
| 1932----- | 235 | 10 | 245 | 4 | | NA | NA | 4 | 249 | NA | NA | 249 |
| 1933----- | 204 | 23 | 227 | 4 | | NA | NA | 4 | 231 | NA | NA | 231 |
| 1934----- | 238 | 26 | 264 | 4 | | NA | NA | 4 | 268 | NA | NA | 268 |
| 1935----- | 239 | 23 | 262 | 12 | | NA | NA | 12 | 274 | NA | NA | 274 |
| 1936----- | 222 | 14 | 236 | 8 | | NA | - | 8 | 244 | NA | NA | 244 |
| 1937----- | 190 | 19 | 209 | 6 | | NA | - | 6 | 215 | NA | NA | 215 |
| 1938----- | 204 | 11 | 215 | 10 | | NA | - | 10 | 225 | NA | NA | 225 |
| 1939----- | 191 | 13 | 204 | 7 | | NA | - | 7 | 211 | NA | NA | 211 |
| 1940----- | 172 | 7 | 179 | 5 | | NA | - | 5 | 184 | NA | NA | 184 |
| 1941----- | 172 | 16 | 188 | 6 | | NA | - | 6 | 194 | NA | NA | 194 |
| 1942----- | 210 | 12 | 222 | 4 | | NA | - | 4 | 226 | NA | NA | 226 |
| 1943----- | 197 | 18 | 215 | 6 | | 5 | - | 11 | 226 | NA | NA | 226 |
| 1944----- | 151 | 16 | 167 | 5 | | 2 | - | 7 | 174 | NA | NA | 174 |
| 1945----- | 129 | 13 | 142 | 1 | | - | - | 1 | 143 | NA | NA | 143 |
| 1946----- | 152 | 13 | 165 | 7 | | 1 | - | 8 | 173 | NA | NA | 173 |
| 1947----- | 153 | 13 | 166 | 7 | | - | - | 7 | 173 | NA | NA | 173 |
| 1948----- | 119 | 8 | 127 | 9 | | 1 | - | 10 | 137 | NA | NA | 137 |
| 1949----- | 83 | 5 | 88 | 3 | | - | - | 3 | 91 | NA | NA | 91 |
| 1950----- | 78 | 9 | 87 | 4 | | 2 | - | 6 | 93 | NA | NA | 93 |
| 1951----- | 89 | 9 | 98 | 3 | | - | - | 3 | 101 | NA | NA | 101 |
| 1952----- | 85 | 6 | 91 | 7 | | 1 | - | 8 | 99 | NA | NA | 99 |
| 1953----- | 60 | 4 | 64 | - | | - | - | - | 64 | NA | NA | 64 |
| 1954----- | 51 | 5 | 56 | 6 | | - | - | 6 | 62 | NA | NA | 62 |
| 1955----- | 49 | 7 | 56 | 3 | | 1 | - | 4 | 60 | NA | NA | 60 |
| 1956----- | 48 | 4 | 52 | 3 | | 1 | - | 4 | 56 | NA | NA | 56 |
| 1957----- | 49 | - | 49 | - | | - | - | - | 49 | NA | 2 | 51 |
| 1958----- | 26 | 1 | 27 | 3 | | - | - | 3 | 30 | NA | 2 | 32 |
| 1959----- | 41 | - | 41 | 1 | | - | 1 | 2 | 43 | NA | 4 | 47 |
| 1960----- | 28 | - | 28 | 4 | | 1 | - | 5 | 33 | NA | 2 | 35 |
| 1961----- | 14 | 1 | 15 | 3 | | - | - | 3 | 18 | NA | 1 | 19 |
| 1962----- | 18 | 2 | 20 | 3 | | - | - | 3 | 23 | NA | 3 | 26 |
| 1963----- | 27 | - | 27 | 3 | | 1 | - | 4 | 31 | NA | 1 | 32 |
| 1964----- | 22 | - | 22 | - | | - | - | - | 22 | NA | 2 | 24 |
| 1965----- | 8 | - | 8 | - | | - | - | - | 8 | NA | - | 8 |
| 1966----- | 5 | - | 5 | 1 | | - | - | 1 | 6 | NA | - | 6 |
| 1967----- | 8 | - | 8 | 1 | | - | - | 1 | 9 | NA | - | 9 |
| 1968----- | 1 | - | 1 | 2 | | - | - | 2 | 3 | NA | 1 | 4 |
| 1969----- | 7 | 1 | 8 | 3 | | - | - | 3 | 11 | NA | 2 | 13 |
| 1970----- | 1 | - | 1 | 2 | | - | - | 2 | 3 | NA | 2 | 5 |
| 1971----- | 1 | - | 1 | 1 | | - | - | 1 | 2 | NA | 3 | 5 |
| 1972----- | 1 | - | 1 | 2 | | - | - | 2 | 3 | - | - | 3 |
| 1973----- | 1 | - | 1 | - | | - | - | - | 1 | - | - | 1 |
| 1974----- | 1 | 1 | 2 | - | | - | - | - | 2 | - | - | 2 |
| 1975----- | - | - | - | 1 | | - | - | 1 | 1 | - | 1 | 2 |
| 1976----- | - | - | - | - | | - | - | - | - | - | 1 | 1 |
| 1977----- | 9 | - | 9 | 1 | | - | - | 1 | 10 | - | 1 | 11 |

SURFACE AUGER MINING NOT REPORTED

NA Not available.

TABLE 3B. - Number of fatal injuries, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931---- | 1,026 | 52 | 1,078 | 2 | NA | NA | NA | 2 | 1,080 | NA | NA | 1,080 |
| 1932---- | 895 | 52 | 947 | 11 | NA | NA | NA | 11 | 958 | NA | NA | 958 |
| 1933---- | 772 | 52 | 824 | 9 | NA | NA | NA | 9 | 833 | NA | NA | 833 |
| 1934---- | 894 | 56 | 950 | 8 | NA | NA | NA | 8 | 958 | NA | NA | 958 |
| 1935---- | 905 | 49 | 954 | 14 | NA | NA | NA | 14 | 968 | NA | NA | 968 |
| 1936---- | 1,034 | 49 | 1,083 | 15 | NA | NA | - | 15 | 1,098 | NA | NA | 1,098 |
| 1937---- | 1,128 | 62 | 1,190 | 8 | NA | NA | - | 8 | 1,198 | NA | NA | 1,198 |
| 1938---- | 823 | 39 | 862 | 18 | NA | NA | - | 18 | 880 | NA | NA | 880 |
| 1939---- | 823 | 35 | 858 | 9 | NA | NA | - | 9 | 867 | NA | NA | 867 |
| 1940---- | 1,136 | 46 | 1,182 | 22 | NA | NA | - | 22 | 1,204 | NA | NA | 1,204 |
| 1941---- | 994 | 44 | 1,038 | 34 | NA | NA | - | 34 | 1,072 | NA | NA | 1,072 |
| 1942---- | 1,143 | 71 | 1,214 | 31 | NA | NA | - | 31 | 1,245 | NA | NA | 1,245 |
| 1943---- | 1,130 | 62 | 1,192 | 33 | NA | - | - | 33 | 1,225 | NA | NA | 1,225 |
| 1944---- | 1,015 | 59 | 1,074 | 50 | NA | - | - | 50 | 1,124 | NA | NA | 1,124 |
| 1945---- | 831 | 56 | 887 | 38 | NA | - | - | 38 | 925 | NA | NA | 925 |
| 1946---- | 711 | 50 | 761 | 34 | NA | - | - | 34 | 795 | NA | NA | 795 |
| 1947---- | 894 | 46 | 940 | 45 | NA | - | - | 45 | 985 | NA | NA | 985 |
| 1948---- | 761 | 47 | 808 | 54 | NA | - | - | 54 | 862 | NA | NA | 862 |
| 1949---- | 425 | 47 | 472 | 22 | NA | - | - | 22 | 494 | NA | NA | 494 |
| 1950---- | 469 | 46 | 515 | 35 | NA | - | - | 35 | 550 | NA | NA | 550 |
| 1951---- | 618 | 35 | 653 | 31 | NA | - | - | 31 | 684 | NA | NA | 684 |
| 1952---- | 389 | 34 | 423 | 26 | NA | - | - | 26 | 449 | NA | NA | 449 |
| 1953---- | 349 | 27 | 376 | 21 | NA | - | - | 21 | 397 | NA | NA | 397 |
| 1954---- | 291 | 27 | 318 | 16 | NA | - | - | 16 | 334 | NA | NA | 334 |
| 1955---- | 303 | 32 | 335 | 22 | 3 | - | - | 25 | 360 | NA | NA | 360 |
| 1956---- | 342 | 23 | 365 | 25 | 2 | - | - | 27 | 392 | NA | NA | 392 |
| 1957---- | 375 | 27 | 402 | 22 | 3 | - | - | 25 | 427 | NA | NA | 427 |
| 1958---- | 289 | 18 | 307 | 16 | 3 | - | - | 19 | 326 | NA | NA | 326 |
| 1959---- | 210 | 17 | 227 | 19 | - | - | - | 19 | 246 | NA | NA | 246 |
| 1960---- | 246 | 21 | 267 | 20 | 3 | - | - | 23 | 290 | NA | NA | 290 |
| 1961---- | 242 | 18 | 260 | 14 | 1 | - | - | 15 | 275 | NA | NA | 275 |
| 1962---- | 226 | 19 | 245 | 17 | 1 | - | - | 18 | 263 | NA | NA | 263 |
| 1963---- | 218 | 12 | 230 | 19 | 3 | - | - | 22 | 252 | NA | NA | 252 |
| 1964---- | 188 | 14 | 202 | 15 | 1 | - | - | 16 | 218 | NA | NA | 218 |
| 1965---- | 215 | 17 | 232 | 18 | 1 | - | - | 19 | 251 | NA | NA | 251 |
| 1966---- | 189 | 8 | 197 | 22 | 3 | - | - | 25 | 222 | NA | 5 | 227 |
| 1967---- | 166 | 12 | 178 | 21 | 2 | - | - | 23 | 201 | NA | 12 | 213 |
| 1968---- | 267 | 8 | 275 | 22 | 6 | - | - | 28 | 303 | NA | 4 | 307 |
| 1969---- | 142 | 13 | 155 | 25 | 3 | - | - | 28 | 183 | NA | 7 | 190 |
| 1970---- | 205 | 14 | 219 | 27 | 4 | - | - | 31 | 250 | NA | 5 | 255 |
| 1971---- | 140 | 8 | 148 | 22 | 3 | - | - | 25 | 173 | NA | 3 | 176 |
| 1972---- | 121 | 6 | 127 | 18 | 1 | - | - | 19 | 146 | - | 7 | 153 |
| 1973---- | 98 | 6 | 104 | 16 | 1 | - | - | 17 | 121 | 2 | 8 | 131 |
| 1974---- | 89 | 6 | 95 | 24 | 2 | - | - | 26 | 121 | - | 10 | 131 |
| 1975---- | 99 | 12 | 111 | 31 | 3 | - | - | 34 | 145 | - | 8 | 153 |
| 1976---- | 104 | 5 | 109 | 23 | 1 | - | - | 24 | 133 | - | 7 | 140 |
| 1977---- | 82 | 9 | 91 | 26 | 2 | - | - | 28 | 119 | 1 | 8 | 128 |

NA Not available.

TABLE 4. - Number of nonfatal disabling injuries, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931---- | 71,593 | 5,600 | 77,193 | 765 | NA | NA | NA | 765 | 77,958 | NA | NA | 77,958 |
| 1932---- | 50,815 | 4,604 | 55,419 | 864 | NA | NA | NA | 864 | 56,283 | NA | NA | 56,283 |
| 1933---- | 51,651 | 6,248 | 57,899 | 1,230 | NA | NA | NA | 1,230 | 59,129 | NA | NA | 59,129 |
| 1934---- | 58,673 | 5,773 | 64,446 | 1,113 | NA | NA | NA | 1,113 | 65,559 | NA | NA | 65,559 |
| 1935---- | 57,038 | 5,083 | 62,121 | 1,305 | NA | NA | NA | 1,305 | 63,426 | NA | NA | 63,426 |
| 1936---- | 60,774 | 5,056 | 65,830 | 1,702 | NA | NA | 8 | 1,710 | 67,540 | NA | NA | 67,540 |
| 1937---- | 60,083 | 4,623 | 64,706 | 1,523 | NA | NA | 30 | 1,553 | 66,259 | NA | NA | 66,259 |
| 1938---- | 45,088 | 3,324 | 48,412 | 1,210 | NA | NA | 14 | 1,224 | 49,636 | NA | NA | 49,636 |
| 1939---- | 46,314 | 4,149 | 50,463 | 1,289 | NA | NA | 21 | 1,310 | 51,773 | NA | NA | 51,773 |
| 1940---- | 51,729 | 4,528 | 56,257 | 1,490 | NA | NA | 29 | 1,519 | 57,776 | NA | NA | 57,776 |
| 1941---- | 54,859 | 4,547 | 59,406 | 1,622 | NA | NA | 29 | 1,651 | 61,057 | NA | NA | 61,057 |
| 1942---- | 60,133 | 5,046 | 65,179 | 1,595 | NA | NA | - | 1,595 | 66,774 | NA | NA | 66,774 |
| 1943---- | 56,559 | 6,027 | 62,586 | 1,835 | NA | 147 | 26 | 2,008 | 64,594 | NA | NA | 64,594 |
| 1944---- | 54,180 | 6,648 | 60,828 | 2,556 | NA | 286 | 21 | 2,863 | 63,691 | NA | NA | 63,691 |
| 1945---- | 48,271 | 6,007 | 54,278 | 2,702 | NA | 121 | 16 | 2,839 | 57,117 | NA | NA | 57,117 |
| 1946---- | 46,824 | 5,847 | 52,671 | 2,518 | NA | 137 | 24 | 2,679 | 55,350 | NA | NA | 55,350 |
| 1947---- | 49,076 | 5,622 | 54,698 | 2,897 | NA | 49 | 16 | 2,962 | 57,660 | NA | NA | 57,660 |
| 1948---- | 44,930 | 5,473 | 50,403 | 2,961 | NA | 97 | 11 | 3,069 | 53,472 | NA | NA | 53,472 |
| 1949---- | 29,883 | 3,517 | 33,400 | 1,948 | NA | 42 | 15 | 2,005 | 35,405 | NA | NA | 35,405 |
| 1950---- | 31,279 | 3,707 | 34,986 | 2,246 | NA | 30 | 2 | 2,278 | 37,264 | NA | NA | 37,264 |
| 1951---- | 29,660 | 3,597 | 33,257 | 2,255 | NA | 34 | 7 | 2,296 | 35,553 | NA | NA | 35,553 |
| 1952---- | 25,378 | 2,975 | 28,353 | 1,698 | NA | 14 | 9 | 1,721 | 30,074 | NA | NA | 30,074 |
| 1953---- | 20,278 | 2,344 | 22,622 | 1,604 | NA | 24 | 8 | 1,636 | 24,258 | NA | NA | 24,258 |
| 1954---- | 14,563 | 1,797 | 16,360 | 1,342 | NA | 11 | 5 | 1,358 | 17,718 | NA | NA | 17,718 |
| 1955---- | 15,618 | 2,081 | 17,699 | 1,140 | 32 | 13 | 1 | 1,186 | 18,885 | NA | NA | 18,885 |
| 1956---- | 16,256 | 2,086 | 18,342 | 1,318 | 98 | 52 | 6 | 1,474 | 19,816 | NA | NA | 19,816 |
| 1957---- | 15,276 | 1,800 | 17,076 | 1,339 | 76 | 71 | 4 | 1,490 | 18,566 | NA | 226 | 18,792 |
| 1958---- | 11,348 | 1,395 | 12,743 | 1,150 | 58 | 20 | 1 | 1,229 | 13,972 | NA | 188 | 14,160 |
| 1959---- | 9,672 | 1,196 | 10,868 | 1,054 | 41 | 17 | 1 | 1,113 | 11,981 | NA | 182 | 12,163 |
| 1960---- | 9,291 | 1,229 | 10,520 | 1,125 | 71 | 20 | 1 | 1,217 | 11,737 | NA | 165 | 11,902 |
| 1961---- | 8,706 | 1,203 | 9,909 | 1,052 | 54 | 20 | 2 | 1,128 | 11,037 | NA | 160 | 11,197 |
| 1962---- | 8,567 | 1,133 | 9,700 | 1,027 | 61 | 15 | 4 | 1,107 | 10,807 | NA | 137 | 10,944 |
| 1963---- | 8,576 | 1,168 | 9,744 | 1,099 | 83 | 30 | 3 | 1,215 | 10,959 | NA | 174 | 11,133 |
| 1964---- | 8,634 | 1,058 | 9,692 | 1,116 | 66 | 15 | 2 | 1,199 | 10,891 | NA | 179 | 11,070 |
| 1965---- | 8,651 | 1,054 | 9,705 | 1,178 | 79 | 13 | 1 | 1,271 | 10,976 | NA | 162 | 11,138 |
| 1966---- | 7,965 | 801 | 8,766 | 1,043 | 90 | 8 | 2 | 1,143 | 9,909 | NA | 537 | 10,446 |
| 1967---- | 7,730 | 687 | 8,417 | 949 | 94 | 13 | 1 | 1,057 | 9,474 | NA | 641 | 10,115 |
| 1968---- | 7,339 | 633 | 7,972 | 1,039 | 94 | 16 | - | 1,149 | 9,121 | NA | 518 | 9,639 |
| 1969---- | 7,840 | 518 | 8,358 | 967 | 91 | 10 | - | 1,068 | 9,426 | NA | 491 | 9,917 |
| 1970---- | 8,906 | 625 | 9,531 | 1,346 | 99 | 13 | - | 1,458 | 10,989 | NA | 563 | 11,552 |
| 1971---- | 8,967 | 789 | 9,756 | 1,564 | 111 | 25 | - | 1,700 | 11,456 | NA | 460 | 11,916 |
| 1972---- | 9,823 | 552 | 10,375 | 1,305 | 49 | 14 | - | 1,368 | 11,743 | 45 | 541 | 12,329 |
| 1973---- | 8,818 | 388 | 9,206 | 1,208 | 45 | 11 | - | 1,264 | 10,470 | 80 | 670 | 11,220 |
| 1974---- | 6,309 | 380 | 6,689 | 1,229 | 28 | 10 | - | 1,267 | 7,956 | 82 | 507 | 8,545 |
| 1975---- | 8,170 | 517 | 8,687 | 1,714 | 36 | 10 | - | 1,760 | 10,447 | 89 | 571 | 11,107 |
| 1976---- | 10,658 | 732 | 11,390 | 2,071 | 31 | 6 | - | 2,108 | 13,498 | 114 | 777 | 14,389 |
| 1977---- | 10,991 | 733 | 11,724 | 2,246 | 24 | 7 | - | 2,277 | 14,001 | 126 | 862 | 14,989 |

NA Not available.

TABLE 4A. - Number of nonfatal disabling injuries, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931----- | 21,307 | 2,505 | 23,812 | 171 | SURFACE AUGER MINING NOT REPORTED | NA | NA | 171 | 23,983 | NA | NA | 23,983 |
| 1932----- | 14,892 | 1,941 | 16,833 | 98 | | NA | NA | 98 | 16,931 | NA | NA | 16,931 |
| 1933----- | 11,599 | 3,210 | 14,809 | 374 | | NA | NA | 374 | 15,183 | NA | NA | 15,183 |
| 1934----- | 15,827 | 2,362 | 18,189 | 388 | | NA | NA | 388 | 18,577 | NA | NA | 18,577 |
| 1935----- | 13,372 | 1,955 | 15,327 | 570 | | NA | NA | 570 | 15,897 | NA | NA | 15,897 |
| 1936----- | 14,372 | 2,152 | 16,524 | 494 | | NA | 8 | 502 | 17,026 | NA | NA | 17,026 |
| 1937----- | 11,815 | 1,319 | 13,134 | 248 | | NA | 30 | 278 | 13,412 | NA | NA | 13,412 |
| 1938----- | 11,396 | 1,258 | 12,654 | 174 | | NA | 14 | 188 | 12,842 | NA | NA | 12,842 |
| 1939----- | 11,492 | 1,560 | 13,052 | 156 | | NA | 21 | 177 | 13,229 | NA | NA | 13,229 |
| 1940----- | 12,033 | 1,569 | 13,602 | 151 | | NA | 29 | 180 | 13,782 | NA | NA | 13,782 |
| 1941----- | 12,641 | 1,578 | 14,219 | 172 | | NA | 29 | 201 | 14,420 | NA | NA | 14,420 |
| 1942----- | 11,866 | 1,580 | 13,446 | 135 | | NA | - | 135 | 13,581 | NA | NA | 13,581 |
| 1943----- | 11,524 | 1,526 | 13,050 | 304 | | 147 | 26 | 477 | 13,527 | NA | NA | 13,527 |
| 1944----- | 9,947 | 1,672 | 11,619 | 512 | | 286 | 21 | 819 | 12,438 | NA | NA | 12,438 |
| 1945----- | 8,804 | 1,511 | 10,315 | 471 | | 121 | 16 | 608 | 10,923 | NA | NA | 10,923 |
| 1946----- | 10,400 | 1,490 | 11,890 | 482 | | 137 | 24 | 643 | 12,533 | NA | NA | 12,533 |
| 1947----- | 9,914 | 1,153 | 11,067 | 503 | | 49 | 16 | 568 | 11,635 | NA | NA | 11,635 |
| 1948----- | 9,693 | 1,167 | 10,860 | 426 | | 97 | 11 | 534 | 11,394 | NA | NA | 11,394 |
| 1949----- | 6,678 | 829 | 7,507 | 293 | | 42 | 15 | 350 | 7,857 | NA | NA | 7,857 |
| 1950----- | 7,468 | 907 | 8,375 | 467 | | 30 | 2 | 499 | 8,874 | NA | NA | 8,874 |
| 1951----- | 6,081 | 872 | 6,953 | 478 | | 34 | 7 | 519 | 7,472 | NA | NA | 7,472 |
| 1952----- | 5,349 | 655 | 6,004 | 328 | | 14 | 9 | 351 | 6,355 | NA | NA | 6,355 |
| 1953----- | 3,367 | 468 | 3,835 | 279 | | 24 | 8 | 311 | 4,146 | NA | NA | 4,146 |
| 1954----- | 2,452 | 344 | 2,796 | 160 | | 11 | 5 | 176 | 2,972 | NA | NA | 2,972 |
| 1955----- | 2,331 | 402 | 2,733 | 172 | | 13 | 1 | 186 | 2,919 | NA | NA | 2,919 |
| 1956----- | 2,611 | 426 | 3,037 | 235 | | 52 | 6 | 293 | 3,330 | NA | NA | 3,330 |
| 1957----- | 2,184 | 160 | 2,344 | 232 | | 71 | 4 | 307 | 2,651 | NA | 226 | 2,877 |
| 1958----- | 1,558 | 154 | 1,712 | 203 | | 20 | 1 | 224 | 1,936 | NA | 188 | 2,124 |
| 1959----- | 1,197 | 125 | 1,322 | 201 | | 17 | 1 | 219 | 1,541 | NA | 182 | 1,723 |
| 1960----- | 947 | 85 | 1,032 | 183 | | 20 | 1 | 204 | 1,236 | NA | 165 | 1,401 |
| 1961----- | 831 | 98 | 929 | 184 | | 20 | 2 | 206 | 1,135 | NA | 160 | 1,295 |
| 1962----- | 759 | 91 | 850 | 155 | | 15 | 4 | 174 | 1,024 | NA | 137 | 1,161 |
| 1963----- | 826 | 84 | 910 | 178 | | 30 | 3 | 211 | 1,121 | NA | 174 | 1,295 |
| 1964----- | 917 | 62 | 979 | 167 | | 15 | 2 | 184 | 1,163 | NA | 179 | 1,342 |
| 1965----- | 700 | 45 | 745 | 146 | | 13 | 1 | 160 | 905 | NA | 162 | 1,067 |
| 1966----- | 495 | 54 | 549 | 126 | | 8 | 2 | 136 | 685 | NA | 144 | 829 |
| 1967----- | 312 | 32 | 344 | 118 | | 13 | 1 | 132 | 476 | NA | 133 | 609 |
| 1968----- | 215 | 26 | 241 | 125 | | 16 | - | 141 | 382 | NA | 122 | 504 |
| 1969----- | 197 | 22 | 219 | 116 | | 10 | - | 126 | 345 | NA | 147 | 492 |
| 1970----- | 168 | 15 | 183 | 139 | | 13 | - | 152 | 335 | NA | 168 | 503 |
| 1971----- | 212 | 15 | 227 | 150 | | 25 | - | 175 | 402 | NA | 151 | 553 |
| 1972----- | 72 | 5 | 77 | 127 | | 14 | - | 141 | 218 | 2 | 97 | 317 |
| 1973----- | 73 | 2 | 75 | 117 | | 11 | - | 128 | 203 | 14 | 123 | 340 |
| 1974----- | 43 | 4 | 47 | 82 | | 10 | - | 92 | 139 | 11 | 97 | 247 |
| 1975----- | 33 | - | 33 | 101 | | 9 | - | 110 | 143 | 10 | 98 | 251 |
| 1976----- | 37 | 2 | 39 | 126 | | 6 | - | 132 | 171 | 10 | 112 | 293 |
| 1977----- | 58 | 1 | 59 | 104 | | 7 | - | 111 | 170 | 14 | 105 | 289 |

NA Not available.

TABLE 4B. - Number of nonfatal disabling injuries, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931---- | 50,286 | 3,095 | 53,381 | 594 | NA | NA | NA | 594 | 53,975 | NA | NA | 53,975 |
| 1932---- | 35,923 | 2,663 | 38,586 | 766 | NA | NA | NA | 766 | 39,352 | NA | NA | 39,352 |
| 1933---- | 40,052 | 3,038 | 43,090 | 856 | NA | NA | NA | 856 | 43,946 | NA | NA | 43,946 |
| 1934---- | 42,846 | 3,411 | 46,257 | 725 | NA | NA | NA | 725 | 46,982 | NA | NA | 46,982 |
| 1935---- | 43,666 | 3,128 | 46,794 | 735 | NA | NA | NA | 735 | 47,529 | NA | NA | 47,529 |
| 1936---- | 46,402 | 2,904 | 49,306 | 1,208 | NA | NA | - | 1,208 | 50,514 | NA | NA | 50,514 |
| 1937---- | 48,268 | 3,304 | 51,572 | 1,275 | NA | NA | - | 1,275 | 52,847 | NA | NA | 52,847 |
| 1938---- | 33,692 | 2,066 | 35,758 | 1,036 | NA | NA | - | 1,036 | 36,794 | NA | NA | 36,794 |
| 1939---- | 34,822 | 2,589 | 37,411 | 1,133 | NA | NA | - | 1,133 | 38,544 | NA | NA | 38,544 |
| 1940---- | 39,696 | 2,959 | 42,655 | 1,339 | NA | NA | - | 1,339 | 43,994 | NA | NA | 43,994 |
| 1941---- | 42,218 | 2,969 | 45,187 | 1,450 | NA | NA | - | 1,450 | 46,637 | NA | NA | 46,637 |
| 1942---- | 48,267 | 3,466 | 51,733 | 1,460 | NA | NA | - | 1,460 | 53,193 | NA | NA | 53,193 |
| 1943---- | 45,035 | 4,501 | 49,536 | 1,531 | NA | - | - | 1,531 | 51,067 | NA | NA | 51,067 |
| 1944---- | 44,233 | 4,976 | 49,209 | 2,044 | NA | - | - | 2,044 | 51,253 | NA | NA | 51,253 |
| 1945---- | 39,467 | 4,496 | 43,963 | 2,231 | NA | - | - | 2,231 | 46,194 | NA | NA | 46,194 |
| 1946---- | 36,424 | 4,357 | 40,781 | 2,036 | NA | - | - | 2,036 | 42,817 | NA | NA | 42,817 |
| 1947---- | 39,162 | 4,469 | 43,631 | 2,394 | NA | - | - | 2,394 | 46,025 | NA | NA | 46,025 |
| 1948---- | 35,237 | 4,306 | 39,543 | 2,535 | NA | - | - | 2,535 | 42,078 | NA | NA | 42,078 |
| 1949---- | 23,205 | 2,688 | 25,893 | 1,655 | NA | - | - | 1,655 | 27,548 | NA | NA | 27,548 |
| 1950---- | 23,811 | 2,800 | 26,611 | 1,779 | NA | - | - | 1,779 | 28,390 | NA | NA | 28,390 |
| 1951---- | 23,579 | 2,725 | 26,304 | 1,777 | NA | - | - | 1,777 | 28,081 | NA | NA | 28,081 |
| 1952---- | 20,029 | 2,320 | 22,349 | 1,370 | NA | - | - | 1,370 | 23,719 | NA | NA | 23,719 |
| 1953---- | 16,911 | 1,876 | 18,787 | 1,325 | NA | - | - | 1,325 | 20,112 | NA | NA | 20,112 |
| 1954---- | 12,111 | 1,453 | 13,564 | 1,182 | NA | - | - | 1,182 | 14,746 | NA | NA | 14,746 |
| 1955---- | 13,287 | 1,679 | 14,966 | 968 | 32 | - | - | 1,000 | 15,966 | NA | NA | 15,966 |
| 1956---- | 13,645 | 1,660 | 15,305 | 1,083 | 98 | - | - | 1,181 | 16,486 | NA | NA | 16,486 |
| 1957---- | 13,092 | 1,640 | 14,732 | 1,107 | 76 | - | - | 1,183 | 15,915 | NA | NA | 15,915 |
| 1958---- | 9,790 | 1,241 | 11,031 | 947 | 58 | - | - | 1,005 | 12,036 | NA | NA | 12,036 |
| 1959---- | 8,475 | 1,071 | 9,546 | 853 | 41 | - | - | 894 | 10,440 | NA | NA | 10,440 |
| 1960---- | 8,344 | 1,144 | 9,488 | 942 | 71 | - | - | 1,013 | 10,501 | NA | NA | 10,501 |
| 1961---- | 7,875 | 1,105 | 8,980 | 868 | 54 | - | - | 922 | 9,902 | NA | NA | 9,902 |
| 1962---- | 7,808 | 1,042 | 8,850 | 872 | 61 | - | - | 933 | 9,783 | NA | NA | 9,783 |
| 1963---- | 7,750 | 1,084 | 8,834 | 921 | 83 | - | - | 1,004 | 9,838 | NA | NA | 9,838 |
| 1964---- | 7,717 | 996 | 8,713 | 949 | 66 | - | - | 1,015 | 9,728 | NA | NA | 9,728 |
| 1965---- | 7,951 | 1,009 | 8,960 | 1,032 | 79 | - | - | 1,111 | 10,071 | NA | NA | 10,071 |
| 1966---- | 7,470 | 747 | 8,217 | 917 | 90 | - | - | 1,007 | 9,224 | NA | 393 | 9,617 |
| 1967---- | 7,418 | 655 | 8,073 | 831 | 94 | - | - | 925 | 8,998 | NA | 508 | 9,506 |
| 1968---- | 7,124 | 607 | 7,731 | 914 | 94 | - | - | 1,008 | 8,739 | NA | 396 | 9,135 |
| 1969---- | 7,643 | 496 | 8,139 | 851 | 91 | - | - | 942 | 9,081 | NA | 344 | 9,425 |
| 1970---- | 8,738 | 610 | 9,348 | 1,207 | 99 | - | - | 1,306 | 10,654 | NA | 395 | 11,049 |
| 1971---- | 8,755 | 774 | 9,529 | 1,414 | 111 | - | - | 1,525 | 11,054 | NA | 309 | 12,363 |
| 1972---- | 9,751 | 547 | 10,298 | 1,178 | 49 | - | - | 1,227 | 11,525 | 43 | 444 | 12,012 |
| 1973---- | 8,745 | 386 | 9,131 | 1,091 | 45 | - | - | 1,136 | 10,267 | 66 | 547 | 10,880 |
| 1974---- | 6,266 | 376 | 6,642 | 1,147 | 28 | - | - | 1,175 | 7,817 | 71 | 410 | 8,298 |
| 1975---- | 8,137 | 517 | 8,654 | 1,613 | 36 | 1 | - | 1,650 | 10,304 | 79 | 473 | 10,856 |
| 1976---- | 10,621 | 730 | 11,351 | 1,945 | 31 | - | - | 1,976 | 13,327 | 104 | 665 | 14,096 |
| 1977---- | 10,933 | 732 | 11,665 | 2,142 | 24 | - | - | 2,166 | 13,831 | 112 | 757 | 14,700 |

NA Not available.

TABLE 5. - Fatal injury-frequency rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 1.84 | 0.64 | 1.67 | 0.54 | NA | NA | NA | 0.54 | 1.66 | NA | NA | 1.66 |
| 1932-- | 1.93 | .62 | 1.74 | 1.20 | NA | NA | NA | 1.20 | 1.73 | NA | NA | 1.73 |
| 1933-- | 1.47 | .65 | 1.35 | .87 | NA | NA | NA | .87 | 1.34 | NA | NA | 1.34 |
| 1934-- | 1.58 | .67 | 1.45 | .74 | NA | NA | NA | .74 | 1.43 | NA | NA | 1.43 |
| 1935-- | 1.67 | .63 | 1.52 | 1.37 | NA | NA | NA | 1.37 | 1.52 | NA | NA | 1.52 |
| 1936-- | 1.62 | .49 | 1.46 | 1.02 | NA | NA | - | 1.00 | 1.45 | NA | NA | 1.45 |
| 1937-- | 1.72 | .67 | 1.57 | .60 | NA | NA | - | .58 | 1.55 | NA | NA | 1.55 |
| 1938-- | 1.78 | .52 | 1.60 | 1.33 | NA | NA | - | 1.31 | 1.59 | NA | NA | 1.59 |
| 1939-- | 1.61 | .46 | 1.44 | .67 | NA | NA | - | .66 | 1.42 | NA | NA | 1.42 |
| 1940-- | 1.87 | .47 | 1.68 | .96 | NA | NA | - | .94 | 1.65 | NA | NA | 1.65 |
| 1941-- | 1.54 | .48 | 1.39 | 1.11 | NA | NA | - | 1.09 | 1.37 | NA | NA | 1.37 |
| 1942-- | 1.63 | .56 | 1.47 | .84 | NA | NA | - | .82 | 1.44 | NA | NA | 1.44 |
| 1943-- | 1.61 | .50 | 1.43 | .81 | NA | 1.74 | - | .84 | 1.40 | NA | NA | 1.40 |
| 1944-- | 1.41 | .42 | 1.23 | .84 | NA | .43 | - | .80 | 1.20 | NA | NA | 1.20 |
| 1945-- | 1.33 | .42 | 1.16 | .58 | NA | - | - | .55 | 1.11 | NA | NA | 1.11 |
| 1946-- | 1.31 | .42 | 1.15 | .59 | NA | .32 | - | .58 | 1.10 | NA | NA | 1.10 |
| 1947-- | 1.47 | .38 | 1.27 | .67 | NA | - | - | .64 | 1.22 | NA | NA | 1.22 |
| 1948-- | 1.33 | .37 | 1.15 | .77 | NA | .45 | - | .76 | 1.11 | NA | NA | 1.11 |
| 1949-- | 1.08 | .48 | .97 | .41 | NA | - | - | .39 | .91 | NA | NA | .91 |
| 1950-- | 1.05 | .46 | .94 | .55 | NA | 1.65 | - | .56 | .90 | NA | NA | .90 |
| 1951-- | 1.38 | .37 | 1.19 | .52 | NA | - | - | .51 | 1.13 | NA | NA | 1.13 |
| 1952-- | 1.10 | .40 | .97 | .55 | NA | 1.65 | - | .55 | .92 | NA | NA | .92 |
| 1953-- | 1.11 | .35 | .96 | .39 | NA | - | - | .38 | .90 | NA | NA | .90 |
| 1954-- | 1.26 | .46 | 1.10 | .48 | NA | - | - | .47 | 1.02 | NA | NA | 1.02 |
| 1955-- | 1.20 | .53 | 1.06 | .51 | 2.00 | 2.29 | - | .56 | 1.00 | NA | NA | 1.00 |
| 1956-- | 1.30 | .35 | 1.11 | .52 | .74 | .80 | - | .53 | 1.03 | NA | NA | 1.03 |
| 1957-- | 1.51 | .41 | 1.30 | .42 | 1.27 | - | - | .45 | 1.18 | NA | 0.36 | 1.17 |
| 1958-- | 1.48 | .36 | 1.26 | .39 | 1.47 | - | - | .43 | 1.12 | NA | .39 | 1.11 |
| 1959-- | 1.30 | .34 | 1.11 | .43 | - | - | 3.96 | .42 | .99 | NA | .87 | .99 |
| 1960-- | 1.51 | .45 | 1.29 | .52 | 1.39 | 1.53 | - | .57 | 1.16 | NA | .48 | 1.15 |
| 1961-- | 1.57 | .45 | 1.34 | .39 | .53 | - | - | .39 | 1.17 | NA | .25 | 1.15 |
| 1962-- | 1.55 | .51 | 1.34 | .46 | .43 | - | - | .45 | 1.17 | NA | .80 | 1.16 |
| 1963-- | 1.54 | .29 | 1.28 | .49 | 1.07 | 1.90 | - | .53 | 1.14 | NA | .26 | 1.12 |
| 1964-- | 1.30 | .36 | 1.12 | .33 | .41 | - | - | .33 | .96 | NA | .55 | .96 |
| 1965-- | 1.40 | .44 | 1.21 | .40 | .42 | - | - | .39 | 1.05 | NA | - | 1.04 |
| 1966-- | 1.26 | .31 | 1.12 | .55 | 1.04 | - | - | .57 | 1.01 | NA | .27 | .96 |
| 1967-- | 1.13 | .51 | 1.05 | .52 | .73 | - | - | .52 | .94 | NA | .63 | .92 |
| 1968-- | 1.80 | .38 | 1.63 | .57 | 2.00 | - | - | .65 | 1.42 | NA | .27 | 1.33 |
| 1969-- | .98 | .72 | .95 | .63 | .98 | - | - | .64 | .88 | NA | .50 | .85 |
| 1970-- | 1.25 | .72 | 1.20 | .55 | 1.08 | - | - | .58 | 1.05 | NA | .36 | 1.00 |
| 1971-- | .92 | .42 | .86 | .39 | .79 | - | - | .41 | .74 | NA | .36 | .71 |
| 1972-- | .72 | .35 | .68 | .38 | .51 | - | - | .38 | .61 | - | .32 | .58 |
| 1973-- | .58 | .36 | .56 | .28 | .58 | - | - | .28 | .49 | 0.37 | .34 | .48 |
| 1974-- | .52 | .39 | .51 | .33 | 1.06 | - | - | .35 | .46 | - | .41 | .45 |
| 1975-- | .47 | .51 | .47 | .33 | 2.06 | - | - | .36 | .44 | - | 31 | .42 |
| 1976-- | .48 | .21 | .45 | .22 | .87 | - | - | .23 | .38 | - | .27 | .37 |
| 1977-- | .44 | .37 | .43 | .23 | 1.78 | - | - | .74 | .37 | .15 | .27 | .36 |

NA Not available.

TABLE 5A. - Fatal injury-frequency rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 2.20 | 0.58 | 1.85 | 1.30 | | NA | NA | 1.30 | 1.84 | NA | NA | 1.84 |
| 1932-- | 1.97 | .29 | 1.60 | 1.09 | | NA | NA | 1.09 | 1.59 | NA | NA | 1.59 |
| 1933-- | 1.77 | .68 | 1.52 | .71 | | NA | NA | .71 | 1.49 | NA | NA | 1.49 |
| 1934-- | 1.77 | .70 | 1.54 | .57 | | NA | NA | .57 | 1.50 | NA | NA | 1.50 |
| 1935-- | 2.08 | .72 | 1.79 | 1.60 | | NA | NA | 1.60 | 1.78 | NA | NA | 1.78 |
| 1936-- | 1.92 | .42 | 1.59 | 1.07 | | NA | - | 1.02 | 1.56 | NA | NA | 1.56 |
| 1937-- | 1.87 | .68 | 1.62 | 1.00 | | NA | - | .92 | 1.58 | NA | NA | 1.58 |
| 1938-- | 2.36 | .45 | 1.94 | 2.12 | | NA | - | 1.97 | 1.94 | NA | NA | 1.94 |
| 1939-- | 2.09 | .50 | 1.73 | 1.35 | | NA | - | 1.25 | 1.71 | NA | NA | 1.71 |
| 1940-- | 1.90 | .28 | 1.55 | .82 | | NA | - | .74 | 1.50 | NA | NA | 1.50 |
| 1941-- | 1.80 | .59 | 1.53 | .97 | | NA | - | .86 | 1.49 | NA | NA | 1.49 |
| 1942-- | 2.11 | .39 | 1.71 | .60 | | NA | - | .53 | 1.64 | NA | NA | 1.64 |
| 1943-- | 1.87 | .53 | 1.54 | .78 | | 1.74 | - | .95 | 1.50 | NA | NA | 1.50 |
| 1944-- | 1.41 | .40 | 1.13 | .48 | | .43 | - | .43 | 1.06 | NA | NA | 1.06 |
| 1945-- | 1.40 | .36 | 1.11 | .11 | | - | - | .08 | 1.01 | NA | NA | 1.01 |
| 1946-- | 1.53 | .35 | 1.21 | .65 | | .32 | - | .54 | 1.14 | NA | NA | 1.14 |
| 1947-- | 1.57 | .37 | 1.26 | .64 | | - | - | .49 | 1.18 | NA | NA | 1.18 |
| 1948-- | 1.18 | .23 | .93 | .78 | | .45 | - | .68 | .91 | NA | NA | .91 |
| 1949-- | 1.15 | .19 | .89 | .35 | | - | - | .28 | .83 | NA | NA | .83 |
| 1950-- | 1.02 | .33 | .84 | .36 | | 1.65 | - | .47 | .80 | NA | NA | .80 |
| 1951-- | 1.30 | .34 | 1.03 | .28 | | - | - | .25 | .95 | NA | NA | .95 |
| 1952-- | 1.39 | .26 | 1.08 | .67 | | 1.65 | - | .70 | 1.03 | NA | NA | 1.03 |
| 1953-- | 1.45 | .22 | 1.07 | - | | - | - | - | .92 | NA | NA | .92 |
| 1954-- | 1.77 | .34 | 1.29 | .99 | | - | - | .88 | 1.23 | NA | NA | 1.23 |
| 1955-- | 1.82 | .57 | 1.43 | .48 | | 2.29 | - | .58 | 1.30 | NA | NA | 1.30 |
| 1956-- | 1.73 | .29 | 1.26 | .40 | | .80 | - | .45 | 1.12 | NA | NA | 1.12 |
| 1957-- | 2.05 | - | 1.60 | - | | - | - | - | 1.26 | NA | 0.36 | 1.15 |
| 1958-- | 1.47 | .18 | 1.16 | .49 | | - | - | .42 | .99 | NA | .39 | .90 |
| 1959-- | 2.94 | - | 2.21 | .19 | | - | 3.96 | .32 | 1.73 | NA | .87 | 1.60 |
| 1960-- | 2.58 | - | 1.92 | .84 | | 1.53 | - | .89 | 1.63 | NA | .48 | 1.43 |
| 1961-- | 1.51 | .27 | 1.16 | .64 | | - | - | .54 | .97 | NA | .25 | .85 |
| 1962-- | 2.13 | .61 | 1.70 | .68 | | - | - | .58 | 1.36 | NA | .80 | 1.26 |
| 1963-- | 3.20 | - | 2.33 | .62 | | 1.90 | - | .72 | 1.81 | NA | .26 | 1.52 |
| 1964-- | 2.65 | - | 1.96 | - | | - | - | - | 1.31 | NA | .55 | 1.18 |
| 1965-- | 1.24 | - | .90 | - | | - | - | - | .60 | NA | - | .49 |
| 1966-- | 1.10 | - | .74 | .30 | | - | - | .25 | .56 | NA | - | .44 |
| 1967-- | 2.25 | - | 1.48 | .31 | | - | - | .25 | .96 | NA | - | .73 |
| 1968-- | .38 | - | .24 | .61 | | - | - | .50 | .37 | NA | .35 | .36 |
| 1969-- | 3.04 | 1.04 | 2.45 | .90 | | - | - | .74 | 1.50 | NA | .73 | 1.29 |
| 1970-- | .46 | - | .34 | .55 | | - | - | .45 | .41 | NA | .71 | .49 |
| 1971-- | .64 | - | .48 | .28 | | - | - | .23 | .31 | NA | 1.03 | .54 |
| 1972-- | 1.29 | - | 1.01 | .76 | | - | - | .67 | .75 | - | - | .48 |
| 1973-- | 1.33 | - | 1.06 | - | | - | - | - | .28 | - | - | .17 |
| 1974-- | 1.88 | 8.78 | 3.09 | - | | - | - | - | .67 | - | - | .39 |
| 1975-- | - | - | - | .49 | | - | - | .44 | .33 | - | .58 | .40 |
| 1976-- | - | - | - | - | | - | - | - | - | - | .56 | .19 |
| 1977-- | 15.98 | - | 13.52 | .46 | | - | - | .41 | 3.23 | - | .51 | 2.12 |

SURFACE AUGER MINING NOT REPORTED

NA Not available.

TABLE 5B. - Fatal injury-frequency rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 1.74 | 0.68 | 1.62 | 0.22 | NA | NA | NA | 0.22 | 1.60 | NA | NA | 1.60 |
| 1932-- | 1.92 | .78 | 1.78 | 1.24 | NA | NA | NA | 1.24 | 1.77 | NA | NA | 1.77 |
| 1933-- | 1.41 | .64 | 1.31 | .97 | NA | NA | NA | .97 | 1.31 | NA | NA | 1.31 |
| 1934-- | 1.53 | .66 | 1.42 | .86 | NA | NA | NA | .86 | 1.41 | NA | NA | 1.41 |
| 1935-- | 1.58 | .60 | 1.46 | 1.22 | NA | NA | NA | 1.22 | 1.46 | NA | NA | 1.46 |
| 1936-- | 1.57 | .52 | 1.44 | .99 | NA | NA | - | .99 | 1.43 | NA | NA | 1.43 |
| 1937-- | 1.69 | .67 | 1.57 | .46 | NA | NA | - | .46 | 1.54 | NA | NA | 1.54 |
| 1938-- | 1.67 | .54 | 1.53 | 1.10 | NA | NA | - | 1.10 | 1.52 | NA | NA | 1.52 |
| 1939-- | 1.52 | .45 | 1.39 | .48 | NA | NA | - | .48 | 1.36 | NA | NA | 1.36 |
| 1940-- | 1.87 | .53 | 1.70 | .99 | NA | NA | - | .99 | 1.68 | NA | NA | 1.68 |
| 1941-- | 1.50 | .45 | 1.36 | 1.14 | NA | NA | - | 1.14 | 1.35 | NA | NA | 1.35 |
| 1942-- | 1.56 | .61 | 1.43 | .89 | NA | NA | - | .89 | 1.41 | NA | NA | 1.41 |
| 1943-- | 1.58 | .49 | 1.41 | .81 | NA | - | - | .81 | 1.39 | NA | NA | 1.39 |
| 1944-- | 1.41 | .42 | 1.25 | .91 | NA | - | - | .91 | 1.23 | NA | NA | 1.23 |
| 1945-- | 1.32 | .44 | 1.17 | .65 | NA | - | - | .65 | 1.13 | NA | NA | 1.13 |
| 1946-- | 1.28 | .44 | 1.14 | .58 | NA | - | - | .58 | 1.09 | NA | NA | 1.09 |
| 1947-- | 1.45 | .38 | 1.28 | .68 | NA | - | - | .68 | 1.23 | NA | NA | 1.23 |
| 1948-- | 1.35 | .41 | 1.19 | .77 | NA | - | - | .77 | 1.15 | NA | NA | 1.15 |
| 1949-- | 1.07 | .57 | .98 | .42 | NA | - | - | .42 | .93 | NA | NA | .93 |
| 1950-- | 1.06 | .50 | .96 | .59 | NA | - | - | .59 | .92 | NA | NA | .92 |
| 1951-- | 1.39 | .38 | 1.22 | .56 | NA | - | - | .56 | 1.16 | NA | NA | 1.16 |
| 1952-- | 1.05 | .44 | .94 | .52 | NA | - | - | .52 | .90 | NA | NA | .90 |
| 1953-- | 1.06 | .38 | .94 | .45 | NA | - | - | .45 | .89 | NA | NA | .89 |
| 1954-- | 1.20 | .49 | 1.07 | .40 | NA | - | - | .40 | .99 | NA | NA | .99 |
| 1955-- | 1.13 | .52 | 1.02 | .51 | 2.00 | - | - | .56 | .96 | NA | NA | .96 |
| 1956-- | 1.26 | .37 | 1.09 | .53 | .74 | - | - | .55 | 1.02 | NA | NA | 1.02 |
| 1957-- | 1.46 | .45 | 1.27 | .48 | 1.27 | - | - | .52 | 1.17 | NA | NA | 1.17 |
| 1958-- | 1.48 | .38 | 1.27 | 38 | 1.47 | - | - | .43 | 1.14 | NA | NA | 1.14 |
| 1959-- | 1.18 | .38 | 1.02 | .46 | - | - | - | .44 | .92 | NA | NA | .92 |
| 1960-- | 1.44 | .49 | 1.25 | .48 | 1.39 | - | - | .53 | 1.13 | NA | NA | 1.13 |
| 1961-- | 1.57 | .46 | 1.35 | .37 | .53 | - | - | .37 | 1.18 | NA | NA | 1.18 |
| 1962-- | 1.52 | .50 | 1.31 | .43 | .43 | - | - | .43 | 1.15 | NA | NA | 1.15 |
| 1963-- | 1.45 | .32 | 1.22 | .47 | 1.07 | - | - | .51 | 1.09 | NA | NA | 1.09 |
| 1964-- | 1.23 | .38 | 1.07 | .37 | .41 | - | - | .37 | .94 | NA | NA | .94 |
| 1965-- | 1.41 | .48 | 1.23 | .43 | .42 | - | - | .43 | 1.08 | NA | NA | 1.08 |
| 1966-- | 1.26 | .34 | 1.14 | .57 | 1.04 | - | - | .61 | 1.04 | NA | 0.32 | .99 |
| 1967-- | 1.11 | .55 | 1.04 | .54 | .73 | - | - | .55 | .94 | NA | .75 | .93 |
| 1968-- | 1.83 | .41 | 1.66 | .56 | 2.00 | - | - | .67 | 1.46 | NA | .25 | 1.37 |
| 1969-- | .95 | .71 | .92 | .61 | .98 | - | - | .64 | .86 | NA | .46 | .84 |
| 1970-- | 1.26 | .75 | 1.21 | .55 | 1.08 | - | - | .59 | 1.07 | NA | .31 | 1.02 |
| 1971-- | .92 | .43 | .87 | .40 | .79 | - | - | .42 | .75 | NA | .20 | .72 |
| 1972-- | .71 | .36 | .68 | .36 | .51 | - | - | .37 | .61 | - | .36 | .59 |
| 1973-- | .57 | .36 | .55 | .29 | .58 | - | - | .30 | .49 | 0.39 | .37 | .48 |
| 1974-- | .51 | .34 | .50 | .34 | 1.06 | - | - | .36 | .46 | - | .44 | .45 |
| 1975-- | .47 | .51 | .48 | .33 | 2.06 | - | - | .35 | .44 | - | .29 | .42 |
| 1976-- | .48 | .21 | .45 | .23 | .87 | - | - | .23 | .39 | - | .25 | .37 |
| 1977-- | .40 | .37 | .40 | .22 | 1.78 | - | - | .24 | .34 | .15 | .26 | .33 |

NA Not available.

TABLE 6. - Nonfatal disabling injury-frequency rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 95.59 | 46.13 | 88.69 | 59.13 | NA | NA | NA | 59.13 | 88.26 | NA | NA | 88.26 |
| 1932-- | 86.70 | 45.82 | 80.71 | 69.03 | NA | NA | NA | 69.03 | 80.50 | NA | NA | 80.50 |
| 1933-- | 77.87 | 54.52 | 74.43 | 82.29 | NA | NA | NA | 82.29 | 74.58 | NA | NA | 74.58 |
| 1934-- | 81.85 | 47.19 | 76.80 | 68.23 | NA | NA | NA | 68.23 | 76.63 | NA | NA | 76.63 |
| 1935-- | 83.07 | 44.76 | 77.63 | 68.86 | NA | NA | NA | 68.86 | 77.43 | NA | NA | 77.43 |
| 1936-- | 78.40 | 39.46 | 72.87 | 75.19 | NA | NA | 24.66 | 74.47 | 72.91 | NA | NA | 72.91 |
| 1937-- | 78.27 | 38.29 | 72.83 | 64.80 | NA | NA | 55.96 | 64.60 | 72.62 | NA | NA | 72.62 |
| 1938-- | 77.96 | 34.67 | 71.81 | 57.55 | NA | NA | 38.26 | 57.22 | 71.36 | NA | NA | 71.36 |
| 1939-- | 73.38 | 39.67 | 68.59 | 54.00 | NA | NA | 50.66 | 53.95 | 68.12 | NA | NA | 68.12 |
| 1940-- | 74.02 | 40.17 | 69.32 | 52.78 | NA | NA | 47.72 | 52.67 | 68.75 | NA | NA | 68.75 |
| 1941-- | 72.24 | 36.25 | 67.14 | 45.21 | NA | NA | 34.88 | 44.97 | 66.26 | NA | NA | 66.26 |
| 1942-- | 72.31 | 34.34 | 66.61 | 38.33 | NA | NA | - | 37.50 | 65.40 | NA | NA | 65.40 |
| 1943 - | 68.82 | 37.57 | 63.72 | 37.88 | NA | 51.11 | 27.07 | 38.41 | 62.44 | NA | NA | 62.44 |
| 1944-- | 65.54 | 36.86 | 60.40 | 38.94 | NA | 60.98 | 19.43 | 40.10 | 59.06 | NA | NA | 59.06 |
| 1945-- | 66.71 | 36.68 | 61.17 | 39.92 | NA | 44.27 | 18.54 | 39.83 | 59.58 | NA | NA | 59.58 |
| 1946-- | 71.30 | 39.00 | 65.30 | 36.52 | NA | 43.74 | 26.78 | 36.71 | 62.92 | NA | NA | 62.92 |
| 1947-- | 68.91 | 35.90 | 62.96 | 37.46 | NA | 19.80 | 15.95 | 36.65 | 60.72 | NA | NA | 60.72 |
| 1948-- | 67.68 | 36.55 | 61.95 | 36.32 | NA | 43.65 | 12.46 | 36.26 | 59.53 | NA | NA | 59.53 |
| 1949-- | 63.48 | 32.51 | 57.69 | 31.70 | NA | 30.81 | 20.24 | 31.55 | 55.11 | NA | NA | 55.11 |
| 1950-- | 60.26 | 30.96 | 54.77 | 31.63 | NA | 24.73 | 5.75 | 31.39 | 52.38 | NA | NA | 52.38 |
| 1951-- | 57.93 | 30.42 | 52.77 | 34.20 | NA | 43.62 | 22.14 | 34.25 | 50.99 | NA | NA | 50.99 |
| 1952-- | 58.84 | 29.44 | 53.26 | 28.11 | NA | 23.04 | 28.05 | 28.06 | 50.66 | NA | NA | 50.66 |
| 1953-- | 54.92 | 26.38 | 49.38 | 29.48 | NA | 28.71 | 32.05 | 29.48 | 47.23 | NA | NA | 47.23 |
| 1954-- | 53.77 | 25.63 | 47.98 | 29.01 | NA | 20.40 | 26.37 | 28.90 | 45.67 | NA | NA | 45.67 |
| 1955-- | 53.12 | 28.14 | 48.10 | 23.14 | 21.30 | 29.73 | 4.67 | 23.07 | 45.03 | NA | NA | 45.03 |
| 1956-- | 54.35 | 27.40 | 48.88 | 24.31 | 36.49 | 41.48 | 21.03 | 25.22 | 45.69 | NA | NA | 45.69 |
| 1957-- | 54.44 | 27.17 | 49.23 | 25.72 | 32.22 | 58.94 | 16.98 | 26.68 | 46.10 | NA | 41.11 | 46.04 |
| 1958-- | 52.23 | 26.52 | 47.94 | 23.86 | 28.37 | 24.95 | 3.97 | 23.96 | 44.06 | NA | 36.51 | 43.94 |
| 1959-- | 50.21 | 24.21 | 44.90 | 22.64 | 21.20 | 24.97 | 3.96 | 22.52 | 41.11 | NA | 39.75 | 41.09 |
| 1960-- | 51.13 | 26.40 | 46.09 | 24.45 | 32.81 | 30.69 | 4.60 | 24.81 | 42.32 | NA | 39.19 | 42.28 |
| 1961-- | 53.38 | 28.30 | 48.19 | 24.44 | 28.73 | 35.20 | 8.08 | 24.66 | 43.91 | NA | 40.53 | 43.86 |
| 1962-- | 54.45 | 27.57 | 48.88 | 23.50 | 26.31 | 30.33 | 17.32 | 23.68 | 44.08 | NA | 36.42 | 43.96 |
| 1963-- | 53.86 | 28.36 | 48.62 | 24.25 | 29.66 | 56.91 | 14.37 | 24.87 | 43.96 | NA | 44.51 | 43.97 |
| 1964-- | 53.61 | 26.84 | 48.35 | 24.75 | 26.83 | 27.15 | 9.24 | 24.81 | 43.78 | NA | 49.49 | 43.86 |
| 1965-- | 54.25 | 27.58 | 49.09 | 26.12 | 33.20 | 26.75 | 5.19 | 26.39 | 44.65 | NA | 51.62 | 44.73 |
| 1966-- | 51.72 | 31.16 | 48.78 | 25.00 | 31.26 | 16.08 | 11.74 | 25.25 | 44.04 | NA | 28.59 | 42.85 |
| 1967-- | 50.38 | 29.24 | 47.57 | 22.43 | 34.37 | 21.11 | 6.79 | 23.07 | 42.53 | NA | 33.68 | 41.84 |
| 1968-- | 49.39 | 30.07 | 46.99 | 24.59 | 31.29 | 25.74 | - | 24.97 | 42.29 | NA | 27.62 | 41.12 |
| 1969-- | 51.58 | 26.70 | 48.77 | 21.84 | 29.84 | 16.91 | - | 22.22 | 42.95 | NA | 27.24 | 41.76 |
| 1970-- | 54.11 | 32.12 | 51.79 | 25.67 | 26.82 | 19.09 | - | 25.60 | 45.60 | NA | 29.34 | 44.40 |
| 1971-- | 58.30 | 41.11 | 56.40 | 26.54 | 29.39 | 40.58 | - | 26.81 | 48.46 | NA | 25.96 | 46.89 |
| 1972-- | 57.61 | 32.36 | 55.32 | 24.84 | 25.19 | 45.21 | - | 24.95 | 48.45 | 13.22 | 24.86 | 46.08 |
| 1973-- | 51.33 | 23.03 | 48.80 | 20.94 | 25.97 | 35.44 | - | 21.14 | 42.15 | 14.78 | 28.16 | 40.41 |
| 1974-- | 36.38 | 21.14 | 34.95 | 16.83 | 14.86 | 35.16 | - | 16.85 | 29.85 | 14.77 | 20.56 | 28.79 |
| 1975-- | 38.82 | 22.00 | 37.13 | 17.74 | 24.77 | 23.54 | - | 17.86 | 31.42 | 13.62 | 19.60 | 30.17 |
| 1976-- | 48.90 | 30.58 | 47.09 | 20.04 | 27.02 | 11.80 | - | 20.08 | 38.91 | 16.60 | 26.41 | 37.55 |
| 1977-- | 53.28 | 30.23 | 50.86 | 18.91 | 21.38 | 16.94 | - | 18.93 | 39.91 | 18.57 | 26.13 | 38.37 |

NA Not available.

TABLE 6A. - Nonfatal disabling injury-frequency rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 133.43 | 55.80 | 116.40 | 44.56 | | NA | NA | 44.56 | 115.07 | NA | NA | 115.07 |
| 1932-- | 124.91 | 56.98 | 109.82 | 26.75 | | NA | NA | 26.75 | 107.88 | NA | NA | 107.88 |
| 1933-- | 100.45 | 95.56 | 99.35 | 66.07 | | NA | NA | 66.07 | 98.13 | NA | NA | 98.13 |
| 1934-- | 117.80 | 63.74 | 106.12 | 55.71 | | NA | NA | 55.71 | 104.15 | NA | NA | 104.15 |
| 1935-- | 116.53 | 61.41 | 104.56 | 75.91 | | NA | NA | 75.91 | 103.16 | NA | NA | 103.16 |
| 1936-- | 124.37 | 65.01 | 111.15 | 65.84 | | NA | 24.66 | 64.13 | 108.80 | NA | NA | 108.80 |
| 1937-- | 116.33 | 47.49 | 101.54 | 41.50 | | NA | 55.96 | 42.69 | 98.72 | NA | NA | 98.72 |
| 1938-- | 131.67 | 51.94 | 114.24 | 36.89 | | NA | 38.26 | 36.99 | 110.85 | NA | NA | 110.85 |
| 1939-- | 125.78 | 59.44 | 110.98 | 30.08 | | NA | 50.66 | 31.60 | 107.37 | NA | NA | 107.37 |
| 1940-- | 132.94 | 62.21 | 117.53 | 24.73 | | NA | 47.72 | 26.82 | 112.55 | NA | NA | 112.55 |
| 1941-- | 131.97 | 57.76 | 115.50 | 27.89 | | NA | 34.88 | 28.72 | 110.83 | NA | NA | 110.83 |
| 1942-- | 119.33 | 51.68 | 103.42 | 20.39 | | NA | - | 17.88 | 98.73 | NA | NA | 98.73 |
| 1943-- | 109.48 | 44.88 | 93.71 | 39.32 | | 51.11 | 27.07 | 41.24 | 89.68 | NA | NA | 89.68 |
| 1944-- | 92.75 | 41.74 | 78.88 | 48.85 | | 60.98 | 19.43 | 50.39 | 76.05 | NA | NA | 76.05 |
| 1945-- | 95.43 | 41.76 | 80.31 | 50.98 | | 44.27 | 18.54 | 47.37 | 77.32 | NA | NA | 77.32 |
| 1946-- | 104.53 | 39.91 | 86.89 | 44.75 | | 43.74 | 26.78 | 43.45 | 82.65 | NA | NA | 82.65 |
| 1947-- | 101.76 | 33.20 | 83.74 | 46.19 | | 19.80 | 15.95 | 39.53 | 79.41 | NA | NA | 79.41 |
| 1948-- | 96.39 | 33.01 | 79.90 | 36.97 | | 43.65 | 12.46 | 36.50 | 75.69 | NA | NA | 75.69 |
| 1949-- | 92.20 | 31.73 | 76.17 | 33.90 | | 30.81 | 20.24 | 32.56 | 71.88 | NA | NA | 71.88 |
| 1950-- | 97.30 | 33.59 | 80.72 | 41.55 | | 24.73 | 5.75 | 38.98 | 76.14 | NA | NA | 76.14 |
| 1951-- | 88.56 | 33.13 | 73.20 | 44.43 | | 43.62 | 22.14 | 43.78 | 69.94 | NA | NA | 69.94 |
| 1952-- | 87.78 | 27.90 | 71.13 | 31.41 | | 23.04 | 28.05 | 30.87 | 66.35 | NA | NA | 66.35 |
| 1953-- | 81.24 | 25.18 | 63.88 | 34.22 | | 28.71 | 32.05 | 33.66 | 59.85 | NA | NA | 59.85 |
| 1954-- | 84.92 | 23.63 | 64 38 | 26.39 | | 20.40 | 26.37 | 25.92 | 59.18 | NA | NA | 59.18 |
| 1955-- | 86.48 | 32.94 | 69.80 | 27.79 | | 29.73 | 4.67 | 27.19 | 63.46 | NA | NA | 63.46 |
| 1956-- | 94.35 | 31.35 | 73.61 | 31.67 | | 41.48 | 21.03 | 32.70 | 66.31 | NA | NA | 66.31 |
| 1957-- | 91.32 | 23.66 | 76.40 | 34.65 | | 58.94 | 16.98 | 37.74 | 68.30 | NA | 41.11 | 64.93 |
| 1958-- | 87.85 | 28.21 | 73.81 | 33.42 | | 24.95 | 3.97 | 31.42 | 63.85 | NA | 36.51 | 59.88 |
| 1959-- | 85.75 | 27.37 | 71.36 | 37.68 | | 24.97 | 3.96 | 34.95 | 62.16 | NA | 39.75 | 58.66 |
| 1960-- | 87.23 | 22.67 | 70.66 | 33.38 | | 30.69 | 4.60 | 36.19 | 61.06 | NA | 39.19 | 57.30 |
| 1961-- | 89.67 | 26.48 | 71.64 | 39.21 | | 35.20 | 8.08 | 37.40 | 61.43 | NA | 40.53 | 57.75 |
| 1962-- | 89.70 | 27.66 | 72.33 | 34.90 | | 30.33 | 17.32 | 33.68 | 60.53 | NA | 36.42 | 56.14 |
| 1963-- | 98.03 | 26.63 | 78.58 | 36.91 | | 56.91 | 14.37 | 37.96 | 65.41 | NA | 44.51 | 61.53 |
| 1964-- | 110.59 | 21.27 | 87.36 | 34.96 | | 27.15 | 9.24 | 33.18 | 69.43 | NA | 49.49 | 65.89 |
| 1965-- | 108.63 | 18.07 | 83.39 | 40.28 | | 26.75 | 5.19 | 37.18 | 68.37 | NA | 51.62 | 65.16 |
| 1966-- | 108.78 | 24.95 | 81.76 | 37.80 | | 16.08 | 11.74 | 33.99 | 63.92 | NA | 48.72 | 60.64 |
| 1967-- | 87.75 | 17.19 | 63.51 | 37.12 | | 21.11 | 6.79 | 33.48 | 50.86 | NA | 44.33 | 49.27 |
| 1968-- | 80.64 | 18.26 | 58.92 | 38.32 | | 25.74 | - | 35.01 | 47.06 | NA | 42.15 | 45.77 |
| 1969-- | 85.49 | 22.87 | 67.05 | 34.95 | | 16.91 | - | 31.08 | 47.13 | NA | 53.42 | 48.85 |
| 1970-- | 77.45 | 19.13 | 61.97 | 38.50 | | 19.09 | - | 34.25 | 45.32 | NA | 59.32 | 49.20 |
| 1971-- | 135.51 | 29.14 | 109.17 | 41.48 | | 40.58 | - | 40.54 | 62.85 | NA | 51.73 | 59.37 |
| 1972-- | 93.21 | 23.05 | 77.83 | 48.10 | | 46.37 | - | 47.19 | 54.81 | 25.67 | 44.98 | 51.03 |
| 1973-- | 97.00 | 10.70 | 79.84 | 51.16 | | 35.44 | - | 48.39 | 56.63 | 47.90 | 56.70 | 56.24 |
| 1974-- | 80.63 | 35.13 | 72.62 | 39.99 | | 37.23 | - | 39.66 | 46.85 | 54.73 | 50.12 | 48.40 |
| 1975-- | 49.54 | - | 42.37 | 49.92 | | 35.92 | - | 48.28 | 46.77 | 63.37 | 56.60 | 50.74 |
| 1976-- | 53.67 | 16.94 | 48.30 | 59.40 | | 19.76 | - | 54.16 | 52.70 | 64.90 | 63.13 | 56.64 |
| 1977-- | 102.97 | 9.79 | 88.66 | 47.38 | | 32.51 | - | 45.74 | 54.98 | 97.46 | 53.82 | 55.72 |

SURFACE AUGER MINING NOT REPORTED

NA Not available.

TABLE 6B. - Nonfatal disabling injury-frequency rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 85.34 | 40.45 | 80.18 | 65.27 | NA | NA | NA | 65.27 | 79.98 | NA | NA | 79.98 |
| 1932-- | 76.94 | 40.10 | 72.35 | 86.53 | NA | NA | NA | 86.53 | 72.58 | NA | NA | 72.58 |
| 1933-- | 73.11 | 37.50 | 68.52 | 92.18 | NA | NA | NA | 92.18 | 68.87 | NA | NA | 68.87 |
| 1934-- | 73.56 | 40.00 | 69.27 | 77.57 | NA | NA | NA | 77.57 | 69.39 | NA | NA | 69.39 |
| 1935-- | 76.36 | 38.27 | 71.59 | 64.23 | NA | NA | NA | 64.23 | 71.47 | NA | NA | 71.47 |
| 1936-- | 70.34 | 30.56 | 65.33 | 79.82 | NA | NA | - | 79.82 | 65.62 | NA | NA | 65.62 |
| 1937-- | 72.47 | 35.54 | 67.94 | 72.74 | NA | NA | - | 72.74 | 68.05 | NA | NA | 68.05 |
| 1938-- | 68.51 | 28.83 | 63.46 | 63.52 | NA | NA | - | 63.52 | 63.47 | NA | NA | 63.47 |
| 1939-- | 64.51 | 33.05 | 60.52 | 60.65 | NA | NA | - | 60.65 | 60.52 | NA | NA | 60.52 |
| 1940-- | 65.25 | 33.82 | 61.30 | 60.51 | NA | NA | - | 60.51 | 61.28 | NA | NA | 61.28 |
| 1941-- | 63.62 | 30.26 | 59.32 | 48.80 | NA | NA | - | 48.80 | 58.93 | NA | NA | 58.93 |
| 1942-- | 65.92 | 29.78 | 60.97 | 41.73 | NA | NA | - | 41.73 | 60.21 | NA | NA | 60.21 |
| 1943-- | 62.85 | 35.60 | 58.76 | 37.61 | NA | - | - | 37.61 | 57.79 | NA | NA | 57.79 |
| 1944-- | 61.48 | 35.46 | 57.23 | 37.06 | NA | - | - | 37.06 | 56.02 | NA | NA | 56.02 |
| 1945-- | 62.52 | 35.24 | 57.93 | 38.17 | NA | - | - | 38.17 | 56.52 | NA | NA | 56.52 |
| 1946-- | 65.36 | 38.70 | 60.88 | 35.00 | NA | - | - | 35.00 | 58.81 | NA | NA | 58.81 |
| 1947-- | 63.71 | 36.67 | 59.24 | 36.03 | NA | - | - | 36.03 | 57.32 | NA | NA | 57.32 |
| 1948-- | 62.56 | 37.64 | 58.35 | 36.21 | NA | - | - | 36.21 | 56.28 | NA | NA | 56.28 |
| 1949-- | 58.26 | 32.76 | 53.90 | 31.34 | NA | - | - | 31.34 | 51.67 | NA | NA | 51.67 |
| 1950-- | 53.83 | 30.20 | 49.73 | 29.76 | NA | - | - | 29.76 | 47.73 | NA | NA | 47.73 |
| 1951-- | 53.19 | 29.65 | 49.15 | 32.21 | NA | - | - | 32.21 | 47.56 | NA | NA | 47.56 |
| 1952-- | 54.08 | 29.91 | 49.89 | 27.42 | NA | - | - | 27.42 | 47.64 | NA | NA | 47.64 |
| 1953-- | 51.59 | 26.70 | 47.20 | 28.65 | NA | - | - | 28.65 | 45.26 | NA | NA | 45.26 |
| 1954-- | 50.05 | 26.16 | 45.59 | 29.40 | NA | - | - | 29.40 | 43.66 | NA | NA | 43.66 |
| 1955-- | 49.75 | 27.19 | 45.52 | 22.47 | 21.30 | - | - | 22.43 | 42.76 | NA | NA | 42.76 |
| 1956-- | 50.27 | 26.54 | 45.83 | 23.14 | 36.49 | - | - | 23.87 | 42.99 | NA | NA | 42.99 |
| 1957-- | 51.00 | 27.57 | 46.59 | 24.41 | 32.22 | - | - | 24.79 | 43.74 | NA | NA | 43.74 |
| 1958-- | 50.09 | 26.32 | 45.47 | 22.48 | 28.37 | - | - | 22.75 | 41.97 | NA | NA | 41.97 |
| 1959-- | 47.43 | 23.89 | 42.71 | 20.69 | 21.20 | - | - | 20.72 | 39.15 | NA | NA | 39.15 |
| 1960-- | 48.84 | 26.72 | 44.41 | 22.84 | 32.81 | - | - | 23.34 | 40.85 | NA | NA | 40.85 |
| 1961-- | 51.19 | 28.47 | 46.61 | 22.64 | 28.73 | - | - | 22.92 | 42.52 | NA | NA | 42.52 |
| 1962-- | 52.45 | 27.56 | 47.41 | 22.21 | 26.31 | - | - | 22.44 | 42.86 | NA | NA | 42.86 |
| 1963-- | 51.39 | 28.51 | 46.78 | 22.74 | 29.66 | - | - | 23.19 | 42.38 | NA | NA | 42.38 |
| 1964-- | 50.52 | 27.29 | 46.04 | 23.53 | 26.83 | - | - | 23.72 | 41.92 | NA | NA | 41.92 |
| 1965-- | 51.96 | 28.24 | 47.47 | 24.88 | 33.20 | - | - | 25.33 | 43.30 | NA | NA | 43.30 |
| 1966-- | 49.98 | 31.73 | 47.50 | 23.89 | 31.26 | - | - | 24.40 | 43.05 | NA | 24.83 | 41.80 |
| 1967-- | 49.49 | 30.27 | 47.07 | 21.24 | 34.37 | - | - | 22.09 | 42.17 | NA | 31.69 | 41.44 |
| 1968-- | 48.82 | 30.92 | 46.70 | 23.44 | 31.29 | - | - | 24.00 | 42.11 | NA | 24.97 | 40.89 |
| 1969-- | 51.06 | 26.90 | 48.41 | 20.77 | 29.84 | - | - | 21.40 | 42.81 | NA | 22.52 | 41.44 |
| 1970-- | 53.80 | 32.66 | 51.62 | 24.73 | 26.82 | - | - | 24.87 | 45.61 | NA | 24.15 | 44.21 |
| 1971-- | 57.51 | 41.44 | 55.75 | 25.56 | 29.39 | - | - | 25.80 | 48.06 | NA | 20.87 | 46.41 |
| 1972-- | 57.45 | 32.48 | 55.20 | 23.61 | 25.19 | - | - | 23.67 | 48.34 | 12.93 | 22.65 | 45.96 |
| 1973-- | 51.13 | 23.17 | 48.65 | 19.69 | 25.97 | - | - | 19.88 | 41.94 | 12.89 | 25.29 | 40.06 |
| 1974-- | 36.25 | 21.05 | 34.82 | 16.16 | 14.86 | - | - | 16.13 | 29.65 | 13.27 | 18.05 | 28.45 |
| 1975-- | 38.78 | 22.11 | 37.11 | 17.05 | 24.77 | 5.74 | - | 17.14 | 31.27 | 12.39 | 17.26 | 29.89 |
| 1976-- | 48.89 | 30.65 | 47.09 | 19.22 | 27.02 | - | - | 19.27 | 38.78 | 15.50 | 24.05 | 37.29 |
| 1977-- | 53.14 | 30.32 | 50.75 | 18.38 | 21.38 | - | - | 18.37 | 39.77 | 16.86 | 24.39 | 38.14 |

NA Not available.

TABLE 7. - Fatal injury-severity rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 11,040 | 3,855 | 10,037 | 3,246 | NA | NA | NA | 3,246 | 9,938 | NA | NA | 9,938 |
| 1932-- | 11,567 | 3,702 | 10,416 | 7,191 | NA | NA | NA | 7,191 | 10,359 | NA | NA | 10,359 |
| 1933-- | 8,829 | 3,927 | 8,106 | 5,218 | NA | NA | NA | 5,218 | 8,052 | NA | NA | 8,052 |
| 1934-- | 9,475 | 4,022 | 8,680 | 4,414 | NA | NA | NA | 4,414 | 8,599 | NA | NA | 8,599 |
| 1935-- | 9,997 | 3,804 | 9,118 | 8,231 | NA | NA | NA | 8,231 | 9,097 | NA | NA | 9,097 |
| 1936-- | 9,721 | 2,950 | 8,761 | 6,096 | NA | NA | - | 6,010 | 8,693 | NA | NA | 8,693 |
| 1937-- | 10,302 | 4,025 | 9,448 | 3,574 | NA | NA | - | 3,494 | 9,292 | NA | NA | 9,292 |
| 1938-- | 10,655 | 3,129 | 9,585 | 7,990 | NA | NA | - | 7,854 | 9,531 | NA | NA | 9,531 |
| 1939-- | 9,639 | 2,754 | 8,660 | 4,022 | NA | NA | - | 3,953 | 8,510 | NA | NA | 8,510 |
| 1940-- | 11,230 | 2,821 | 10,062 | 5,738 | NA | NA | - | 5,617 | 9,909 | NA | NA | 9,909 |
| 1941-- | 9,212 | 2,870 | 8,314 | 6,689 | NA | NA | - | 6,538 | 8,243 | NA | NA | 8,243 |
| 1942-- | 9,762 | 3,389 | 8,805 | 5,047 | NA | NA | - | 4,937 | 8,644 | NA | NA | 8,644 |
| 1943-- | 9,688 | 2,992 | 8,594 | 4,831 | NA | 10,431 | - | 5,050 | 8,415 | NA | NA | 8,415 |
| 1944-- | 8,463 | 2,495 | 7,394 | 5,028 | NA | 2,559 | - | 4,790 | 7,221 | NA | NA | 7,221 |
| 1945-- | 7,961 | 2,528 | 6,958 | 3,457 | NA | - | - | 3,283 | 6,685 | NA | NA | 6,685 |
| 1946-- | 7,884 | 2,521 | 6,888 | 3,568 | NA | 1,916 | - | 3,453 | 6,603 | NA | NA | 6,603 |
| 1947-- | 8,821 | 2,261 | 7,639 | 4,034 | NA | - | - | 3,861 | 7,317 | NA | NA | 7,317 |
| 1948-- | 7,954 | 2,204 | 6,895 | 4,636 | NA | 2,700 | - | 4,537 | 6,673 | NA | NA | 6,673 |
| 1949-- | 6,475 | 2,884 | 5,804 | 2,441 | NA | - | - | 2,360 | 5,463 | NA | NA | 5,463 |
| 1950-- | 6,323 | 2,756 | 5,654 | 3,295 | NA | 9,890 | - | 3,389 | 5,423 | NA | NA | 5,423 |
| 1951-- | 8,286 | 2,233 | 7,150 | 3,094 | NA | - | - | 3,043 | 6,755 | NA | NA | 6,755 |
| 1952-- | 6,594 | 2,375 | 5,793 | 3,278 | NA | 9,876 | - | 3,326 | 5,538 | NA | NA | 5,538 |
| 1953-- | 6,646 | 2,093 | 5,763 | 2,316 | NA | - | - | 2,271 | 5,386 | NA | NA | 5,386 |
| 1954-- | 7,576 | 2,739 | 6,581 | 2,853 | NA | - | - | 2,809 | 6,124 | NA | NA | 6,124 |
| 1955-- | 7,183 | 3,164 | 6,376 | 3,045 | 11,983 | 13,721 | - | 3,384 | 6,009 | NA | NA | 6,009 |
| 1956-- | 7,824 | 2,128 | 6,668 | 3,098 | 4,468 | 4,786 | - | 3,182 | 6,198 | NA | NA | 6,198 |
| 1957-- | 9,066 | 2,445 | 7,801 | 2,536 | 7,631 | - | - | 2,686 | 7,092 | NA | 2,183 | 7,026 |
| 1958-- | 8,866 | 2,167 | 7,540 | 2,365 | 8,803 | - | - | 2,573 | 6,736 | NA | 2,331 | 6,666 |
| 1959-- | 7,818 | 2,065 | 6,644 | 2,578 | - | - | 23,780 | 2,549 | 5,950 | NA | 5,242 | 5,939 |
| 1960-- | 9,047 | 2,706 | 7,754 | 3,130 | 8,317 | 9,207 | - | 3,425 | 6,988 | NA | 2,850 | 6,926 |
| 1961-- | 9,417 | 2,682 | 8,025 | 2,370 | 3,192 | - | - | 2,362 | 6,994 | NA | 1,520 | 6,910 |
| 1962-- | 9,305 | 3,066 | 8,013 | 2,746 | 2,587 | - | - | 2,695 | 6,999 | NA | 4,786 | 6,965 |
| 1963-- | 9,231 | 1,748 | 7,694 | 2,913 | 6,433 | 11,382 | - | 3,193 | 6,812 | NA | 1,535 | 6,730 |
| 1964-- | 7,824 | 2,131 | 6,705 | 1,996 | 2,439 | - | - | 1,986 | 5,788 | NA | 3,318 | 5,753 |
| 1965-- | 8,391 | 2,669 | 7,284 | 2,394 | 2,521 | - | - | 2,367 | 6,321 | NA | - | 6,241 |
| 1966-- | 7,558 | 1,867 | 6,744 | 3,308 | 6,251 | - | - | 3,446 | 6,081 | NA | 1,597 | 5,735 |
| 1967-- | 6,804 | 3,064 | 6,307 | 3,120 | 4,387 | - | - | 3,143 | 5,657 | NA | 3,783 | 5,509 |
| 1968-- | 10,821 | 2,280 | 9,762 | 3,408 | 11,984 | - | - | 3,911 | 8,513 | NA | 1,600 | 7,960 |
| 1969-- | 5,882 | 4,329 | 5,706 | 3,794 | 5,901 | - | - | 3,870 | 5,304 | NA | 2,995 | 5,129 |
| 1970-- | 7,510 | 4,317 | 7,173 | 3,319 | 6,502 | - | - | 3,477 | 6,299 | NA | 2,189 | 5,996 |
| 1971-- | 5,501 | 2,501 | 5,168 | 2,341 | 4,766 | - | - | 2,460 | 4,441 | NA | 2,031 | 4,273 |
| 1972-- | 4,293 | 2,111 | 4,095 | 2,284 | 3,085 | - | - | 2,298 | 3,688 | - | 1,930 | 3,498 |
| 1973-- | 3,458 | 2,137 | 3,340 | 1,664 | 3,462 | - | - | 1,706 | 2,947 | 2,218 | 2,017 | 2,853 |
| 1974-- | 3,114 | 2,337 | 3,041 | 1,972 | 6,369 | - | - | 2,075 | 2,769 | - | 2,434 | 2,689 |
| 1975-- | 2,822 | 3,064 | 2,846 | 1,987 | 12,383 | - | - | 2,131 | 2,634 | - | 1,854 | 2,526 |
| 1976-- | 2,863 | 1,253 | 2,704 | 1,336 | 5,229 | - | - | 1,372 | 2,301 | - | 1,631 | 2,208 |
| 1977-- | 2,647 | 2,227 | 2,603 | 1,364 | 10,689 | - | - | 1,446 | 2,206 | 884 | 1,637 | 2,135 |

NA Not available.

TABLE 7A. - Fatal injury-severity rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 13,226. | 3,475 | 11,086 | 7,818 | | NA | NA | 7,818 | 11,026 | NA | NA | 11,026 |
| 1932-- | 11,827 | 1,761 | 9,590 | 6,552 | | NA | NA | 6,552 | 9,519 | NA | NA | 9,519 |
| 1933-- | 10,600 | 4,108 | 9,137 | 4,240 | | NA | NA | 4,240 | 8,958 | NA | NA | 8,958 |
| 1934-- | 10,629 | 4,210 | 9,241 | 3,446 | | NA | NA | 3,446 | 9,015 | NA | NA | 9,015 |
| 1935-- | 12,496 | 4,335 | 10,724 | 9,589 | | NA | NA | 9,589 | 10,669 | NA | NA | 10,669 |
| 1936-- | 11,527 | 2,538 | 9,525 | 6,397 | | NA | - | 6,132 | 9,355 | NA | NA | 9,355 |
| 1937-- | 11,224 | 4,105 | 9,695 | 6,025 | | NA | - | 5,529 | 9,495 | NA | NA | 9,495 |
| 1938-- | 14,168 | 8,725 | 11,646 | 12,721 | | NA | - | 11,896 | 11,653 | NA | NA | 11,653 |
| 1939-- | 12,543 | 2,972 | 10,407 | 8,098 | | NA | - | 7,498 | 10,275 | NA | NA | 10,275 |
| 1940-- | 11,402 | 1,665 | 9,280 | 4,914 | | NA | - | 4,469 | 9,016 | NA | NA | 9,016 |
| 1941-- | 10,774 | 3,514 | 9,163 | 5,837 | | NA | - | 5,144 | 8,946 | NA | NA | 8,946 |
| 1942-- | 12,671 | 2,355 | 10,245 | 3,625 | | NA | - | 3,179 | 9,858 | NA | NA | 9,858 |
| 1943-- | 11,229 | 3,176 | 9,263 | 4,657 | | 10,431 | - | 5,706 | 8,990 | NA | NA | 8,990 |
| 1944-- | 8,448 | 2,397 | 6,803 | 2,862 | | 2,559 | - | 2,584 | 6,383 | NA | NA | 6,383 |
| 1945-- | 8,390 | 2,155 | 6,633 | 649 | | - | - | 467 | 6,073 | NA | NA | 6,073 |
| 1946-- | 9,166 | 2,089 | 7,235 | 3,899 | | 1,916 | - | 3,243 | 6,845 | NA | NA | 6,845 |
| 1947-- | 9,423 | 2,246 | 7,537 | 3,857 | | - | - | 2,923 | 7,084 | NA | NA | 7,084 |
| 1948-- | 7,100 | 1,358 | 5,606 | 4,686 | | 2,700 | - | 4,101 | 5,460 | NA | NA | 5,460 |
| 1949-- | 6,875 | 1,148 | 5,357 | 2,082 | | - | - | 1,675 | 4,995 | NA | NA | 4,995 |
| 1950-- | 6,098 | 2,000 | 5,031 | 2,135 | | 9,890 | - | 2,812 | 4,787 | NA | NA | 4,787 |
| 1951-- | 7,777 | 2,052 | 6,190 | 1,673 | | - | - | 1,518 | 5,672 | NA | NA | 5,672 |
| 1952-- | 8,369 | 1,534 | 6,468 | 4,023 | | 9,876 | - | 4,222 | 6,201 | NA | NA | 6,201 |
| 1953-- | 8,686 | 1,291 | 6,396 | - | | - | - | - | 5,543 | NA | NA | 5,543 |
| 1954-- | 10,598 | 2,061 | 7,736 | 5,939 | | - | - | 5,301 | 7,407 | NA | NA | 7,407 |
| 1955-- | 10,908 | 3,442 | 8,581 | 2,909 | | 13,721 | - | 3,509 | 7,827 | NA | NA | 7,827 |
| 1956-- | 10,407 | 1,766 | 7,562 | 2,426 | | 4,786 | - | 2,679 | 6,691 | NA | NA | 6,691 |
| 1957-- | 12,293 | - | 9,583 | - | | - | - | - | 7,575 | NA | 2,183 | 6,906 |
| 1958-- | 8,796 | 1,099 | 6,904 | 2,963 | | - | - | 2,525 | 5,936 | NA | 2,331 | 5,413 |
| 1959-- | 17,623 | - | 13,279 | 1,125 | | - | 23,780 | 1,915 | 10,406 | NA | 5,242 | 9,601 |
| 1960-- | 15,475 | - | 11,503 | 5,034 | | 9,207 | - | 5,322 | 9,781 | NA | 2,850 | 8,588 |
| 1961-- | 9,064 | 1,621 | 6,940 | 3,836 | | - | - | 3,268 | 5,845 | NA | 1,520 | 5,084 |
| 1962-- | 12,763 | 3,647 | 10,211 | 4,053 | | - | - | 3,484 | 8,157 | NA | 4,786 | 7,544 |
| 1963-- | 19,227 | - | 13,990 | 3,732 | | 11,382 | - | 4,318 | 10,853 | NA | 1,535 | 9,122 |
| 1964-- | 15,919 | - | 11,779 | - | | - | - | - | 7,880 | NA | 3,318 | 7,070 |
| 1965-- | 7,449 | - | 5,373 | - | | - | - | - | 3,626 | NA | - | 2,931 |
| 1966-- | 6,593 | - | 4,468 | 1,800 | | - | - | 1,500 | 3,359 | NA | - | 2,633 |
| 1967-- | 13,500 | - | 8,861 | 1,887 | | - | - | 1,522 | 5,770 | NA | - | 4,369 |
| 1968-- | 2,250 | - | 1,467 | 3,679 | | - | - | 2,980 | 2,218 | NA | 2,073 | 2,180 |
| 1969-- | 18,225 | 6,237 | 14,695 | 5,423 | | - | - | 4,440 | 9,016 | NA | 4,361 | 7,744 |
| 1970-- | 2,766 | - | 2,032 | 3,324 | | - | - | 2,704 | 2,435 | NA | 4,237 | 2,934 |
| 1971-- | 3,835 | - | 2,886 | 1,659 | | - | - | 1,390 | 1,876 | NA | 6,167 | 3,221 |
| 1972-- | 7,768 | - | 6,065 | 4,545 | | - | - | 4,016 | 4,526 | - | - | 2,898 |
| 1973-- | 7,973 | - | 6,387 | - | | - | - | - | 1,674 | - | - | 992 |
| 1974-- | 11,250 | 52,700 | 18,542 | - | | - | - | - | 4,045 | - | - | 2,351 |
| 1975-- | - | - | - | 2,966 | | - | - | 2,633 | 1,962 | - | 3,465 | 2,426 |
| 1976-- | - | - | - | - | | - | - | - | - | - | 3,382 | 1,160 |
| 1977-- | 95,865 | - | 81,145 | 2,733 | | - | - | 2,473 | 19,405 | - | 3,076 | 12,725 |

SURFACE AUGER MINING NOT REPORTED

NA Not available.

TABLE 7B. - Fatal injury-severity rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 10,447 | 4,078 | 9,715 | 1,319 | NA | NA | NA | 1,319 | 9,602 | NA | NA | 9,602 |
| 1932-- | 11,501 | 4,698 | 10,654 | 7,455 | NA | NA | NA | 7,455 | 10,602 | NA | NA | 10,602 |
| 1933-- | 8,455 | 3,851 | 7,862 | 5,815 | NA | NA | NA | 5,815 | 7,832 | NA | NA | 7,832 |
| 1934-- | 9,209 | 3,940 | 8,536 | 5,135 | NA | NA | NA | 5,135 | 8,489 | NA | NA | 8,489 |
| 1935-- | 9,495 | 3,597 | 8,758 | 7,340 | NA | NA | NA | 7,340 | 8,733 | NA | NA | 8,733 |
| 1936-- | 9,405 | 3,094 | 8,610 | 5,947 | NA | NA | - | 5,947 | 8,558 | NA | NA | 8,558 |
| 1937-- | 10,161 | 4,001 | 9,406 | 2,738 | NA | NA | - | 2,738 | 9,256 | NA | NA | 9,256 |
| 1938-- | 10,041 | 3,265 | 9,179 | 6,622 | NA | NA | - | 6,622 | 9,107 | NA | NA | 9,107 |
| 1939-- | 9,148 | 2,681 | 8,328 | 2,890 | NA | NA | - | 2,890 | 8,169 | NA | NA | 8,169 |
| 1940-- | 11,204 | 3,154 | 10,192 | 5,965 | NA | NA | - | 5,965 | 10,062 | NA | NA | 10,062 |
| 1941-- | 8,987 | 2,691 | 8,176 | 6,866 | NA | NA | - | 6,866 | 8,127 | NA | NA | 8,127 |
| 1942-- | 9,367 | 3,661 | 8,584 | 5,316 | NA | NA | - | 5,316 | 8,455 | NA | NA | 8,455 |
| 1943-- | 9,462 | 2,942 | 8,484 | 4,864 | NA | - | - | 4,864 | 8,317 | NA | NA | 8,317 |
| 1944-- | 8,465 | 2,523 | 7,495 | 5,440 | NA | - | - | 5,440 | 7,371 | NA | NA | 7,371 |
| 1945-- | 7,898 | 2,634 | 7,013 | 3,901 | NA | - | - | 3,901 | 6,791 | NA | NA | 6,791 |
| 1946-- | 7,656 | 2,665 | 6,817 | 3,507 | NA | - | - | 3,507 | 6,552 | NA | NA | 6,552 |
| 1947-- | 8,726 | 2,265 | 7,657 | 4,064 | NA | - | - | 4,064 | 7,360 | NA | NA | 7,360 |
| 1948-- | 8,106 | 2,465 | 7,154 | 4,628 | NA | - | - | 4,628 | 6,917 | NA | NA | 6,917 |
| 1949-- | 6,402 | 3,436 | 5,896 | 2,500 | NA | - | - | 2,500 | 5,559 | NA | NA | 5,559 |
| 1950-- | 6,362 | 2,977 | 5,775 | 3,513 | NA | - | - | 3,513 | 5,548 | NA | NA | 5,548 |
| 1951-- | 8,364 | 2,285 | 7,320 | 3,371 | NA | - | - | 3,371 | 6,951 | NA | NA | 6,951 |
| 1952-- | 6,302 | 2,630 | 5,666 | 3,122 | NA | - | - | 3,122 | 5,411 | NA | NA | 5,411 |
| 1953-- | 6,388 | 2,305 | 5,667 | 2,724 | NA | - | - | 2,724 | 5,361 | NA | NA | 5,361 |
| 1954-- | 7,216 | 2,916 | 6,413 | 2,388 | NA | - | - | 2,388 | 5,934 | NA | NA | 5,934 |
| 1955-- | 6,807 | 3,109 | 6,113 | 3,064 | 11,983 | - | - | 3,365 | 5,785 | NA | NA | 5,785 |
| 1956-- | 7,560 | 2,206 | 6,558 | 3,205 | 4,468 | - | - | 3,274 | 6,134 | NA | NA | 6,134 |
| 1957-- | 8,765 | 2,723 | 7,628 | 2,910 | 7,631 | - | - | 3,144 | 7,040 | NA | NA | 7,040 |
| 1958-- | 8,872 | 2,291 | 7,593 | 2,279 | 8,803 | - | - | 2,581 | 6,821 | NA | NA | 6,821 |
| 1959-- | 7,052 | 2,275 | 6,094 | 2,765 | - | - | - | 2,642 | 5,535 | NA | NA | 5,535 |
| 1960-- | 8,639 | 2,943 | 7,498 | 2,910 | 8,317 | - | - | 3,179 | 6,768 | NA | NA | 6,768 |
| 1961-- | 9,438 | 2,783 | 8,098 | 2,191 | 3,192 | - | - | 2,237 | 7,085 | NA | NA | 7,085 |
| 1962-- | 9,109 | 3,015 | 7,874 | 2,598 | 2,587 | - | - | 2,597 | 6,913 | NA | NA | 6,913 |
| 1963-- | 8,673 | 1,893 | 7,308 | 2,815 | 6,433 | - | - | 3,049 | 6,513 | NA | NA | 6,513 |
| 1964-- | 7,385 | 2,301 | 6,404 | 2,232 | 2,439 | - | - | 2,244 | 5,637 | NA | NA | 5,637 |
| 1965-- | 8,430 | 2,855 | 7,375 | 2,604 | 2,521 | - | - | 2,599 | 6,474 | NA | NA | 6,474 |
| 1966-- | 7,588 | 2,039 | 6,833 | 3,439 | 6,251 | - | - | 3,635 | 6,217 | NA | 1,895 | 5,919 |
| 1967-- | 6,645 | 3,328 | 6,227 | 3,220 | 4,387 | - | - | 3,296 | 5,652 | NA | 4,491 | 5,571 |
| 1968-- | 10,978 | 2,445 | 9,966 | 3,386 | 11,984 | - | - | 4,001 | 8,759 | NA | 1,513 | 8,245 |
| 1969-- | 5,692 | 4,230 | 5,532 | 3,662 | 5,901 | - | - | 3,817 | 5,176 | NA | 2,749 | 5,013 |
| 1970-- | 7,574 | 4,498 | 7,256 | 3,319 | 6,502 | - | - | 3,542 | 6,422 | NA | 1,834 | 6,121 |
| 1971-- | 5,518 | 2,570 | 5,196 | 2,386 | 4,766 | - | - | 2,538 | 4,513 | NA | 1,216 | 4,313 |
| 1972-- | 4,278 | 2,138 | 4,084 | 2,165 | 3,085 | - | - | 2,199 | 3,674 | - | 2,142 | 3,513 |
| 1973-- | 3,438 | 2,160 | 3,325 | 1,733 | 3,462 | - | - | 1,785 | 2,965 | 2,344 | 2,220 | 2,894 |
| 1974-- | 3,089 | 2,016 | 2,988 | 2,029 | 6,369 | - | - | 2,141 | 2,754 | - | 2,641 | 2,695 |
| 1975-- | 2,831 | 3,079 | 2,856 | 1,966 | 12,383 | - | - | 2,119 | 2,641 | - | 1,752 | 2,527 |
| 1976-- | 2,872 | 1,260 | 2,713 | 1,364 | 5,229 | - | - | 1,404 | 2,322 | - | 1,519 | 2,222 |
| 1977-- | 2,392 | 2,237 | 2,375 | 1,338 | 10,689 | - | - | 1,425 | 2,053 | 903 | 1,547 | 1,993 |

NA Not available.



25

TABLE 8. - Nonfatal disabling injury-severity rates per million man-hours, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1932-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1933-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1934-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1935-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1936-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1937-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1938-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1939-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1940-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1941-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1942-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1943-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1944-- | 2,340 | 1,631 | 2,213 | 1,063 | NA | 533 | 429 | 1,019 | 2,134 | NA | NA | 2,134 |
| 1945-- | 2,781 | 1,323 | 2,512 | 1,301 | NA | 1,737 | 396 | 1,307 | 2,422 | NA | NA | 2,422 |
| 1946-- | 2,888 | 1,345 | 2,601 | 1,251 | NA | 687 | 299 | 1,215 | 2,486 | NA | NA | 2,486 |
| 1947-- | 2,965 | 1,650 | 2,728 | 1,301 | NA | 373 | 231 | 1,259 | 2,603 | NA | NA | 2,603 |
| 1948-- | 3,148 | 1,552 | 2,855 | 1,088 | NA | 727 | 163 | 1,069 | 2,686 | NA | NA | 2,686 |
| 1949-- | 3,665 | 1,590 | 3,277 | 1,381 | NA | 735 | 774 | 1,361 | 3,087 | NA | NA | 3,087 |
| 1950-- | 3,194 | 1,901 | 2,951 | 1,624 | NA | 571 | 245 | 1,600 | 2,814 | NA | NA | 2,814 |
| 1951-- | 3,569 | 1,579 | 3,196 | 1,686 | NA | 1,081 | 174 | 1,672 | 3,049 | NA | NA | 3,049 |
| 1952-- | 3,427 | 1,730 | 3,105 | 1,088 | NA | 807 | 1,487 | 1,088 | 2,896 | NA | NA | 2,896 |
| 1953-- | 3,110 | 1,341 | 2,767 | 1,214 | NA | 525 | 365 | 1,199 | 2,598 | NA | NA | 2,598 |
| 1954-- | 3,116 | 1,361 | 2,755 | 1,310 | NA | 267 | 411 | 1,295 | 2,578 | NA | NA | 2,578 |
| 1955-- | 2,782 | 1,687 | 2,562 | 1,280 | 509 | 412 | 47 | 1,245 | 2,401 | NA | NA | 2,401 |
| 1956-- | 2,756 | 1,072 | 2,415 | 1,309 | 656 | 3,705 | 182 | 1,325 | 2,268 | NA | NA | 2,268 |
| 1957-- | 2,624 | 1,504 | 2,410 | 1,143 | 1,288 | 1,471 | 314 | 1,153 | 2,236 | NA | 1,146 | 2,221 |
| 1958-- | 3,470 | 1,354 | 3,051 | 1,546 | 1,168 | 206 | 24 | 1,502 | 2,801 | NA | 749 | 2,768 |
| 1959-- | 3,024 | 1,427 | 2,698 | 1,087 | 737 | 552 | 20 | 1,060 | 2,420 | NA | 1,714 | 2,409 |
| 1960-- | 3,008 | 1,334 | 2,666 | 1,498 | 1,727 | 1,220 | 198 | 1,499 | 2,460 | NA | 1,753 | 2,449 |
| 1961-- | 3,430 | 1,574 | 3,046 | 1,173 | 667 | 5,720 | 36 | 1,202 | 2,711 | NA | 1,116 | 2,686 |
| 1962-- | 3,373 | 1,617 | 3,010 | 1,660 | 1,066 | 920 | 113 | 1,615 | 2,744 | NA | 1,318 | 2,722 |
| 1963-- | 2,960 | 1,694 | 2,700 | 987 | 4,872 | 1,216 | 819 | 1,211 | 2,408 | NA | 1,748 | 2,398 |
| 1964-- | 3,496 | 1,259 | 3,056 | 963 | 2,459 | 570 | 46 | 1,031 | 2,662 | NA | 3,032 | 2,668 |
| 1965-- | 3,434 | 1,633 | 3,086 | 1,265 | 1,568 | 681 | 145 | 1,269 | 2,730 | NA | 1,802 | 2,718 |
| 1966-- | 2,379 | 1,505 | 2,254 | 1,258 | 830 | 161 | 88 | 1,214 | 2,045 | NA | 1,111 | 1,973 |
| 1967-- | 2,619 | 1,344 | 2,449 | 1,179 | 601 | 794 | 136 | 1,136 | 2,179 | NA | 2,319 | 2,190 |
| 1968-- | 3,315 | 1,169 | 3,048 | 1,003 | 603 | 1,340 | - | 978 | 2,607 | NA | 1,934 | 2,553 |
| 1969-- | 2,916 | 1,282 | 2,731 | 935 | 1,192 | 198 | - | 940 | 2,339 | NA | 911 | 2,230 |
| 1970-- | 2,988 | 1,610 | 2,842 | 922 | 1,065 | 499 | - | 924 | 2,389 | NA | 1,348 | 2,312 |
| 1971-- | 1,541 | 799 | 1,459 | 441 | 378 | 380 | - | 436 | 1,184 | NA | 548 | 1,140 |
| 1972-- | 2,423 | 1,766 | 2,363 | 879 | 746 | 720 | - | 873 | 2,026 | 558 | 842 | 1,911 |
| 1973-- | 2,409 | 995 | 2,282 | 1,250 | 4,532 | 754 | - | 1,342 | 2,056 | 392 | 1,311 | 1,960 |
| 1974-- | 2,413 | 1,405 | 2,318 | 1,249 | 4,225 | 401 | - | 1,321 | 2,037 | 567 | 1,200 | 1,940 |
| 1975-- | 2,351 | 1,283 | 2,244 | 936 | 594 | 1,323 | - | 933 | 1,855 | 759 | 1,132 | 1,778 |
| 1976-- | 2,307 | 1,283 | 2,206 | 824 | 1,013 | 959 | - | 827 | 1,788 | 1,139 | 1,441 | 1,750 |
| 1977-- | 4,051 | 2,729 | 3,912 | 1,353 | 2,123 | 1,237 | - | 1,359 | 3,036 | 1,136 | 2,082 | 2,923 |

NA Not available.

TABLE 8A. - Nonfatal disabling injury-severity rates per million man-hours, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1932-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1933-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1934-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1935-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1936-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1937-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1938-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1939-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1940-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1941-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1942-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1943-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1944-- | 2,092 | 1,343 | 1,888 | 893 | | 533 | 429 | 759 | 1,776 | NA | NA | 1,776 |
| 1945-- | 2,557 | 771 | 2,054 | 1,329 | | 1,737 | 396 | 1,353 | 1,990 | NA | NA | 1,990 |
| 1946-- | 2,814 | 890 | 2,289 | 1,252 | | 687 | 299 | 1,075 | 2,171 | NA | NA | 2,171 |
| 1947-- | 2,742 | 829 | 2,240 | 1,398 | | 373 | 231 | 1,140 | 2,132 | NA | NA | 2,132 |
| 1948-- | 3,424 | 1,351 | 2,885 | 891 | | 727 | 163 | 822 | 2,685 | NA | NA | 2,685 |
| 1949-- | 3,095 | 816 | 2,491 | 1,611 | | 735 | 774 | 1,442 | 2,388 | NA | NA | 2,388 |
| 1950-- | 3,193 | 1,279 | 2,695 | 931 | | 571 | 245 | 878 | 2,495 | NA | NA | 2,495 |
| 1951-- | 3,584 | 1,041 | 2,879 | 2,167 | | 1,081 | 174 | 2,043 | 2,787 | NA | NA | 2,787 |
| 1952-- | 3,073 | 1,241 | 2,563 | 918 | | 807 | 1,487 | 928 | 2,369 | NA | NA | 2,369 |
| 1953-- | 2,844 | 850 | 2,226 | 1,080 | | 525 | 365 | 1,010 | 2,064 | NA | NA | 2,064 |
| 1954-- | 3,734 | 1,326 | 2,927 | 1,070 | | 267 | 411 | 988 | 2,664 | NA | NA | 2,664 |
| 1955-- | 2,900 | 1,193 | 2,368 | 3,000 | | 412 | 47 | 2,742 | 2,423 | NA | NA | 2,423 |
| 1956-- | 4,193 | 884 | 3,103 | 1,183 | | 3,705 | 182 | 1,504 | 2,818 | NA | NA | 2,818 |
| 1957-- | 3,665 | 701 | 3,011 | 1,002 | | 1,471 | 314 | 1,052 | 2,601 | NA | 1,146 | 2,420 |
| 1958-- | 3,465 | 1,993 | 3,118 | 877 | | 206 | 24 | 771 | 2,567 | NA | 749 | 2,303 |
| 1959-- | 3,067 | 538 | 2,444 | 1,429 | | 552 | 20 | 1,277 | 2,149 | NA | 1,714 | 2,081 |
| 1960-- | 2,813 | 723 | 2,277 | 1,032 | | 1,220 | 198 | 1,021 | 1,927 | NA | 1,753 | 1,897 |
| 1961-- | 4,287 | 770 | 3,284 | 1,802 | | 5,720 | 36 | 2,127 | 2,939 | NA | 1,116 | 2,618 |
| 1962-- | 3,036 | 984 | 2,461 | 1,004 | | 920 | 113 | 956 | 2,002 | NA | 1,318 | 1,877 |
| 1963-- | 6,273 | 706 | 4,757 | 1,157 | | 1,216 | 819 | 1,150 | 3,587 | NA | 1,748 | 3,245 |
| 1964-- | 3,960 | 1,246 | 3,254 | 1,005 | | 570 | 46 | 925 | 2,483 | NA | 3,032 | 2,580 |
| 1965-- | 3,373 | 624 | 2,607 | 971 | | 681 | 145 | 901 | 2,052 | NA | 1,802 | 2,004 |
| 1966-- | 3,783 | 664 | 2,778 | 740 | | 161 | 88 | 640 | 1,979 | NA | 1,353 | 1,844 |
| 1967-- | 1,721 | 515 | 1,307 | 775 | | 794 | 136 | 754 | 1,074 | NA | 1,354 | 1,142 |
| 1968-- | 4,523 | 204 | 3,020 | 1,593 | | 1,340 | - | 1,497 | 2,265 | NA | 1,266 | 2,002 |
| 1969-- | 2,999 | 347 | 2,218 | 581 | | 198 | - | 504 | 1,269 | NA | 1,553 | 1,347 |
| 1970-- | 1,902 | 207 | 1,452 | 1,028 | | 499 | - | 913 | 1,128 | NA | 3,060 | 1,663 |
| 1971-- | 1,185 | 321 | 971 | 588 | | 380 | - | 547 | 685 | NA | 706 | 691 |
| 1972-- | 2,202 | 309 | 1,787 | 3,815 | | 739 | - | 3,446 | 3,033 | 90 | 2,205 | 2,709 |
| 1973-- | 3,664 | 11 | 2,937 | 1,435 | | 754 | - | 1,329 | 1,751 | 821 | 1,729 | 1,698 |
| 1974-- | 2,724 | 861 | 2,397 | 1,364 | | 424 | - | 1,255 | 1,504 | 906 | 1,734 | 1,568 |
| 1975-- | 1,761 | - | 1,506 | 2,063 | | 2,239 | - | 2,078 | 1,932 | 2,193 | 1,479 | 1,782 |
| 1976-- | 3,817 | 3,506 | 3,772 | 1,791 | | 1,607 | - | 1,760 | 2,260 | 2,259 | 2,850 | 2,463 |
| 1977-- | 11,781 | 1,243 | 10,163 | 3,932 | | 2,373 | - | 3,768 | 5,144 | 1,817 | 3,861 | 4,569 |

SURFACE AUGER MINING NOT REPORTED

NA Not available



27

TABLE 8B. - Nonfatal disabling injury-severity rates per million man-hours, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1932-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1933-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1934-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1935-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1936-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1937-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1938-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1939-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1940-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1941-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1942-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1943-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1944-- | 2,377 | 1,713 | 2,269 | 1,096 | NA | - | - | 1,096 | 2,198 | NA | NA | 2,198 |
| 1945-- | 2,814 | 1,480 | 2,590 | 1,297 | NA | - | - | 1,297 | 2,497 | NA | NA | 2,497 |
| 1946-- | 2,901 | 1,496 | 2,665 | 1,251 | NA | - | - | 1,251 | 2,552 | NA | NA | 2,552 |
| 1947-- | 3,001 | 1,884 | 2,816 | 1,285 | NA | - | - | 1,285 | 2,689 | NA | NA | 2,689 |
| 1948-- | 3,099 | 1,614 | 2,848 | 1,120 | NA | - | - | 1,120 | 2,687 | NA | NA | 2,687 |
| 1949-- | 3,769 | 1,836 | 3,438 | 1,344 | NA | - | - | 1,344 | 3,231 | NA | NA | 3,231 |
| 1950-- | 3,194 | 2,083 | 3,001 | 1,755 | NA | - | - | 1,755 | 2,876 | NA | NA | 2,876 |
| 1951-- | 3,567 | 1,733 | 3,252 | 1,593 | NA | - | - | 1,593 | 3,097 | NA | NA | 3,097 |
| 1952-- | 3,485 | 1,878 | 3,207 | 1,124 | NA | - | - | 1,124 | 2,998 | NA | NA | 2,998 |
| 1953-- | 3,144 | 1,471 | 2,848 | 1,237 | NA | - | - | 1,237 | 2,681 | NA | NA | 2,681 |
| 1954-- | 3,042 | 1,371 | 2,730 | 1,346 | NA | - | - | 1,346 | 2,566 | NA | NA | 2,566 |
| 1955-- | 2,770 | 1,784 | 2,585 | 1,033 | 509 | - | - | 1,016 | 2,398 | NA | NA | 2,398 |
| 1956-- | 2,610 | 1,113 | 2,330 | 1,329 | 656 | - | - | 1,293 | 2,196 | NA | NA | 2,196 |
| 1957-- | 2,527 | 1,595 | 2,352 | 1,164 | 1,288 | - | - | 1,170 | 2,197 | NA | NA | 2,197 |
| 1958-- | 3,470 | 1,280 | 3,045 | 1,642 | 1,168 | - | - | 1,620 | 2,825 | NA | NA | 2,825 |
| 1959-- | 3,021 | 1,518 | 2,719 | 1,042 | 737 | - | - | 1,029 | 2,446 | NA | NA | 2,446 |
| 1960-- | 3,020 | 1,388 | 2,693 | 1,552 | 1,727 | - | - | 1,561 | 2,502 | NA | NA | 2,502 |
| 1961-- | 3,378 | 1,650 | 3,030 | 1,096 | 667 | - | - | 1,076 | 2,692 | NA | NA | 2,692 |
| 1962-- | 3,393 | 1,673 | 3,044 | 1,734 | 1,066 | - | - | 1,697 | 2,799 | NA | NA | 2,799 |
| 1963-- | 2,775 | 1,776 | 2,574 | 966 | 4,872 | - | - | 1,219 | 2,321 | NA | NA | 2,321 |
| 1964-- | 3,470 | 1,260 | 3,044 | 958 | 2,459 | - | - | 1,044 | 2,675 | NA | NA | 2,675 |
| 1965-- | 3,437 | 1,704 | 3,109 | 1,291 | 1,568 | - | - | 1,306 | 2,769 | NA | NA | 2,769 |
| 1966-- | 2,337 | 1,582 | 2,234 | 1,303 | 830 | - | - | 1,270 | 2,048 | NA | 1,066 | 1,981 |
| 1967-- | 2,640 | 1,415 | 2,485 | 1,212 | 601 | - | - | 1,172 | 2,228 | NA | 2,499 | 2,247 |
| 1968-- | 3,293 | 1,239 | 3,049 | 953 | 603 | - | - | 928 | 2,620 | NA | 2,056 | 2,580 |
| 1969-- | 2,915 | 1,331 | 2,741 | 964 | 1,192 | - | - | 980 | 2,375 | NA | 795 | 2,269 |
| 1970-- | 3,002 | 1,669 | 2,865 | 915 | 1,065 | - | - | 925 | 2,429 | NA | 1,052 | 2,339 |
| 1971-- | 1,545 | 812 | 1,465 | 431 | 378 | - | - | 428 | 1,198 | NA | 517 | 1,157 |
| 1972-- | 2,424 | 1,785 | 2,366 | 723 | 746 | - | - | 724 | 2,009 | 569 | 692 | 1,892 |
| 1973-- | 2,403 | 1,006 | 2,279 | 1,243 | 4,532 | - | - | 1,342 | 2,061 | 367 | 1,269 | 1,966 |
| 1974-- | 2,412 | 1,408 | 2,318 | 1,246 | 4,225 | - | - | 1,323 | 2,043 | 554 | 1,155 | 1,946 |
| 1975-- | 2,353 | 1,290 | 2,246 | 912 | 594 | 6 | - | 906 | 1,854 | 723 | 1,110 | 1,778 |
| 1976-- | 2,302 | 1,272 | 2,200 | 804 | 1,013 | - | - | 804 | 1,784 | 1,113 | 1,350 | 1,740 |
| 1977-- | 4,029 | 2,736 | 3,894 | 1,304 | 2,123 | - | - | 1,310 | 3,018 | 1,121 | 1,970 | 2,901 |

NA Not available.

TABLE 9. - Average men working daily, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931------ | 496,973 | 84,241 | 581,214 | 8,491 | NA | NA | NA | 8,491 | 589,705 | NA | NA | 589,705 |
| 1932------ | 440,084 | 79,059 | 519,143 | 8,480 | NA | NA | NA | 8,480 | 527,623 | NA | NA | 527,623 |
| 1933------ | 432,244 | 80,304 | 512,548 | 10,634 | NA | NA | NA | 10,634 | 532,182 | NA | NA | 532,182 |
| 1934------ | 467,336 | 87,172 | 554,508 | 11,918 | NA | NA | NA | 11,918 | 566,426 | NA | NA | 566,426 |
| 1935------ | 467,607 | 84,858 | 552,465 | 12,737 | NA | NA | NA | 12,737 | 565,202 | NA | NA | 565,202 |
| 1936------ | 481,155 | 87,613 | 568,768 | 15,568 | NA | NA | 246 | 15,814 | 584,582 | NA | NA | 584,582 |
| 1937------ | 487,558 | 85,844 | 573,402 | 16,171 | NA | NA | 283 | 16,454 | 589,856 | NA | NA | 589,856 |
| 1938------ | 445,631 | 80,618 | 526,249 | 14,982 | NA | NA | 297 | 15,279 | 541,528 | NA | NA | 541,528 |
| 1939------ | 440,660 | 81,204 | 521,864 | 17,220 | NA | NA | 291 | 17,511 | 539,375 | NA | NA | 539,375 |
| 1940------ | 434,639 | 79,166 | 513,805 | 19,132 | NA | NA | 330 | 19,462 | 533,267 | NA | NA | 533,267 |
| 1941------ | 440,536 | 82,560 | 523,096 | 23,106 | NA | NA | 490 | 23,596 | 546,692 | NA | NA | 546,692 |
| 1942------ | 419,808 | 85,856 | 505,664 | 24,713 | NA | NA | 484 | 25,197 | 530,861 | NA | NA | 530,861 |
| 1943------ | 374,366 | 82,379 | 456,745 | 27,633 | NA | 1,758 | 380 | 29,771 | 486,516 | NA | NA | 486,516 |
| 1944------ | 336,698 | 79,853 | 416,551 | 34,354 | NA | 2,630 | 402 | 37,386 | 453,937 | NA | NA | 453,937 |
| 1945------ | 321,832 | 78,200 | 400,032 | 35,914 | NA | 1,597 | 378 | 37,889 | 437,921 | NA | NA | 437,921 |
| 1946------ | 339,722 | 80,338 | 420,060 | 40,551 | NA | 2,067 | 401 | 43,019 | 463,079 | NA | NA | 463,079 |
| 1947------ | 360,045 | 83,294 | 443,339 | 44,753 | NA | 1,827 | 437 | 47,017 | 490,356 | NA | NA | 490,356 |
| 1948------ | 371,867 | 86,966 | 458,833 | 46,626 | NA | 1,421 | 453 | 48,500 | 507,333 | NA | NA | 507,333 |
| 1949------ | 356,469 | 83,575 | 440,044 | 43,748 | NA | 1,143 | 371 | 45,262 | 485,306 | NA | NA | 485,306 |
| 1950------ | 350,999 | 84,443 | 435,442 | 46,391 | NA | 1,196 | 210 | 47,797 | 483,239 | NA | NA | 483,239 |
| 1951------ | 319,729 | 79,596 | 399,325 | 41,836 | NA | 577 | 167 | 42,580 | 441,905 | NA | NA | 441,905 |
| 1952------ | 291,162 | 71,786 | 362,948 | 37,749 | NA | 441 | 191 | 38,381 | 401,329 | NA | NA | 401,329 |
| 1953------ | 250,538 | 64,494 | 315,032 | 35,309 | NA | 667 | 118 | 36,094 | 351,126 | NA | NA | 351,126 |
| 1954------ | 198,619 | 54,009 | 252,628 | 30,467 | NA | 507 | 103 | 31,077 | 283,705 | NA | NA | 283,705 |
| 1955------ | 180,890 | 47,799 | 228,689 | 29,677 | 1,126 | 491 | 106 | 31,400 | 260,089 | NA | NA | 260,089 |
| 1956------ | 179,261 | 47,259 | 226,520 | 30,769 | 1,825 | 1,006 | 165 | 33,765 | 260,285 | NA | NA | 260,285 |
| 1957------ | 175,080 | 42,803 | 217,883 | 29,867 | 1,873 | 1,045 | 135 | 32,920 | 250,803 | NA | 3,922 | 254,725 |
| 1958------ | 148,566 | 40,494 | 189,060 | 29,397 | 1,846 | 867 | 146 | 32,256 | 221,316 | NA | 3,574 | 224,890 |
| 1959------ | 134,983 | 34,896 | 169,879 | 27,472 | 1,902 | 769 | 163 | 30,306 | 200,185 | NA | 3,412 | 203,597 |
| 1960------ | 124,743 | 32,399 | 157,142 | 26,648 | 2,031 | 585 | 128 | 29,392 | 186,534 | NA | 3,145 | 189,679 |
| 1961------ | 108,568 | 28,732 | 137,300 | 24,941 | 1,809 | 627 | 161 | 27,538 | 164,838 | NA | 2,730 | 167,568 |
| 1962------ | 103,787 | 27,544 | 131,331 | 24,717 | 2,106 | 563 | 126 | 27,512 | 158,843 | NA | 2,443 | 161,286 |
| 1963------ | 100,642 | 26,093 | 126,735 | 24,770 | 2,473 | 563 | 112 | 27,918 | 154,653 | NA | 2,473 | 157,126 |
| 1964------ | 96,699 | 24,223 | 120,922 | 24,462 | 2,282 | 574 | 108 | 27,426 | 148,348 | NA | 2,413 | 150,761 |
| 1965------ | 96,483 | 23,241 | 119,724 | 24,214 | 2,086 | 566 | 97 | 26,963 | 146,687 | NA | 2,047 | 148,734 |
| 1966------ | 93,401 | 16,308 | 109,709 | 21,888 | 2,494 | 502 | 78 | 24,962 | 134,671 | NA | 10,573 | 145,244 |
| 1967------ | 89,813 | 14,180 | 103,993 | 21,599 | 2,465 | 570 | 65 | 24,699 | 128,692 | NA | 10,620 | 139,312 |
| 1968------ | 86,374 | 12,458 | 98,831 | 21,965 | 2,435 | 603 | 68 | 25,071 | 123,902 | NA | 10,565 | 134,467 |
| 1969------ | 86,272 | 11,123 | 97,395 | 22,674 | 2,649 | 488 | 61 | 25,872 | 123,267 | NA | 10,035 | 133,302 |
| 1970------ | 91,827 | 10,552 | 102,379 | 27,787 | 3,316 | 560 | 63 | 31,726 | 134,105 | NA | 10,375 | 144,480 |
| 1971------ | 86,286 | 11,454 | 97,740 | 30,211 | 3,133 | 399 | 38 | 33,781 | 131,521 | NA | 10,587 | 142,108 |
| 1972------ | 98,137 | 11,259 | 109,396 | 32,991 | 2,373 | 314 | 18 | 35,696 | 145,092 | 1,890 | 15,225 | 162,207 |
| 1973------ | 91,072 | 9,771 | 100,843 | 29,054 | 1,421 | 210 | 23 | 30,708 | 131,551 | 2,673 | 13,019 | 147,243 |
| 1974------ | 101,704 | 11,465 | 113,169 | 42,511 | 1,980 | 244 | 8 | 44,743 | 157,912 | 2,939 | 16,146 | 176,997 |
| 1975------ | 121,830 | 15,230 | 137,060 | 55,764 | 1,798 | 397 | 211 | 58,170 | 195,230 | 3,450 | 19,482 | 218,162 |
| 1976------ | 122,912 | 14,404 | 137,316 | 54,795 | 1,198 | 380 | 6 | 56,379 | 193,695 | 3,742 | 17,195 | 214,632 |
| 1977------ | 126,814 | 14,597 | 141,411 | 64,082 | 1,172 | 303 | 6 | 65,563 | 206,974 | 3,917 | 19,578 | 230,469 |

NA Not available.

TABLE 9A. - Average men working daily, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931----- | 109,280 | 27,919 | 137,199 | 2,232 | SURFACE AUGER MINING NOT REPORTED | NA | NA | 2,232 | 139,431 | NA | NA | 139,431 |
| 1932----- | 94,210 | 24,721 | 118,931 | 2,312 | | NA | NA | 2,312 | 121,243 | NA | NA | 121,243 |
| 1933----- | 79,329 | 21,525 | 100,854 | 3,576 | | NA | NA | 3,576 | 104,430 | NA | NA | 104,430 |
| 1934----- | 82,372 | 21,680 | 104,052 | 4,330 | | NA | NA | 4,330 | 108,382 | NA | NA | 108,382 |
| 1935----- | 77,629 | 20,975 | 98,604 | 4,244 | | NA | NA | 4,244 | 102,848 | NA | NA | 102,848 |
| 1936----- | 76,128 | 21,041 | 97,169 | 4,667 | | NA | 246 | 4,913 | 102,082 | NA | NA | 102,082 |
| 1937----- | 74,422 | 19,904 | 94,326 | 4,476 | | NA | 283 | 4,759 | 99,085 | NA | NA | 99,085 |
| 1938----- | 72,360 | 19,994 | 92,354 | 3,631 | | NA | 297 | 3,928 | 96,282 | NA | NA | 96,282 |
| 1939----- | 69,869 | 19,799 | 89,668 | 4,372 | | NA | 291 | 4,663 | 94,331 | NA | NA | 94,331 |
| 1940----- | 68,639 | 18,558 | 87,197 | 4,893 | | NA | 330 | 5,223 | 92,420 | NA | NA | 92,420 |
| 1941----- | 65,583 | 18,374 | 83,957 | 4,501 | | NA | 490 | 4,991 | 88,948 | NA | NA | 88,948 |
| 1942----- | 58,747 | 18,473 | 77,220 | 4,360 | | NA | 484 | 4,844 | 82,064 | NA | NA | 82,064 |
| 1943----- | 55,590 | 17,064 | 72,654 | 4,589 | | 1,758 | 380 | 6,727 | 79,381 | NA | NA | 79,381 |
| 1944----- | 50,300 | 18,687 | 68,987 | 5,715 | | 2,630 | 402 | 8,747 | 77,734 | NA | NA | 77,734 |
| 1945----- | 47,491 | 18,090 | 65,581 | 5,368 | | 1,597 | 378 | 7,343 | 72,924 | NA | NA | 72,924 |
| 1946----- | 50,451 | 18,468 | 68,919 | 6,550 | | 2,067 | 401 | 9,018 | 77,937 | NA | NA | 77,937 |
| 1947----- | 51,482 | 18,491 | 69,973 | 6,274 | | 1,827 | 437 | 8,538 | 78,511 | NA | NA | 78,511 |
| 1948----- | 51,275 | 18,406 | 69,681 | 6,400 | | 1,421 | 453 | 8,274 | 77,955 | NA | NA | 77,955 |
| 1949----- | 50,331 | 17,890 | 68,221 | 6,140 | | 1,143 | 371 | 7,654 | 75,875 | NA | NA | 75,875 |
| 1950----- | 48,824 | 17,187 | 66,011 | 7,199 | | 1,196 | 210 | 8,605 | 74,616 | NA | NA | 74,616 |
| 1951----- | 44,710 | 17,332 | 62,042 | 6,981 | | 577 | 167 | 7,725 | 69,767 | NA | NA | 69,767 |
| 1952----- | 39,985 | 15,418 | 55,403 | 6,575 | | 441 | 191 | 7,207 | 62,610 | NA | NA | 62,610 |
| 1953----- | 34,377 | 14,746 | 49,123 | 5,793 | | 667 | 118 | 6,578 | 55,701 | NA | NA | 55,701 |
| 1954----- | 24,621 | 11,578 | 36,199 | 4,977 | | 507 | 103 | 5,587 | 41,786 | NA | NA | 41,786 |
| 1955----- | 20,530 | 8,896 | 29,426 | 4,527 | | 491 | 106 | 5,124 | 34,550 | NA | NA | 34,550 |
| 1956----- | 17,902 | 8,594 | 26,496 | 4,840 | | 1,006 | 165 | 6,011 | 32,507 | NA | NA | 32,507 |
| 1957----- | 16,822 | 4,355 | 21,177 | 4,546 | | 1,045 | 135 | 5,726 | 26,903 | NA | 3,922 | 30,825 |
| 1958----- | 13,850 | 3,685 | 17,535 | 4,418 | | 867 | 146 | 5,431 | 22,966 | NA | 3,574 | 26,540 |
| 1959----- | 11,900 | 3,275 | 15,175 | 3,775 | | 769 | 163 | 4,707 | 19,882 | NA | 3,412 | 23,294 |
| 1960----- | 9,041 | 2,682 | 11,723 | 3,470 | | 585 | 128 | 4,183 | 15,906 | NA | 3,145 | 19,051 |
| 1961----- | 6,664 | 2,416 | 9,080 | 3,194 | | 627 | 161 | 3,982 | 13,062 | NA | 2,730 | 15,792 |
| 1962----- | 5,779 | 2,091 | 7,870 | 3,008 | | 563 | 126 | 3,697 | 11,567 | NA | 2,443 | 14,010 |
| 1963----- | 5,449 | 1,876 | 7,325 | 3,025 | | 563 | 112 | 3,700 | 11,025 | NA | 2,473 | 13,498 |
| 1964----- | 5,193 | 1,781 | 6,974 | 3,075 | | 574 | 108 | 3,757 | 10,731 | NA | 2,413 | 13,144 |
| 1965----- | 4,501 | 1,572 | 6,073 | 2,349 | | 566 | 97 | 3,012 | 9,085 | NA | 2,047 | 11,132 |
| 1966----- | 3,332 | 1,339 | 4,671 | 2,085 | | 502 | 78 | 2,665 | 7,336 | NA | 1,956 | 9,292 |
| 1967----- | 2,287 | 1,052 | 3,339 | 1,883 | | 570 | 65 | 2,518 | 5,857 | NA | 1,893 | 7,750 |
| 1968----- | 1,683 | 914 | 2,597 | 1,891 | | 603 | 68 | 2,562 | 5,159 | NA | 1,773 | 6,932 |
| 1969----- | 1,397 | 559 | 1,956 | 1,787 | | 488 | 61 | 2,336 | 4,292 | NA | 1,635 | 5,927 |
| 1970----- | 1,423 | 456 | 1,879 | 1,855 | | 560 | 63 | 2,478 | 4,357 | NA | 1,581 | 5,938 |
| 1971----- | 903 | 352 | 1,255 | 1,775 | | 399 | 38 | 2,212 | 3,467 | NA | 1,561 | 5,028 |
| 1972----- | 662 | 200 | 862 | 2,182 | | 297 | 18 | 2,497 | 3,359 | 40 | 1,523 | 4,922 |
| 1973----- | 438 | 98 | 536 | 1,300 | | 210 | 18 | 1,528 | 2,064 | 154 | 1,139 | 3,357 |
| 1974----- | 354 | 81 | 435 | 1,254 | | 217 | 3 | 1,474 | 1,909 | 163 | 1,337 | 3,409 |
| 1975----- | 496 | 80 | 576 | 1,250 | | 250 | 7 | 1,507 | 2,083 | 83 | 992 | 3,158 |
| 1976----- | 459 | 75 | 534 | 1,281 | | 259 | 6 | 1,546 | 2,080 | 78 | 1,003 | 3,161 |
| 1977----- | 437 | 75 | 512 | 1,275 | | 171 | 6 | 1,452 | 1,964 | 76 | 1,110 | 3,150 |

NA Not available.

TABLE 9B. - Average men working daily, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mining | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931----- | 387,693 | 56,322 | 444,015 | 6,259 | NA | NA | NA | 6,259 | 450,274 | NA | NA | 450,274 |
| 1932----- | 345,874 | 54,338 | 400,212 | 6,168 | NA | NA | NA | 6,168 | 406,380 | NA | NA | 406,380 |
| 1933----- | 352,915 | 58,779 | 411,694 | 7,058 | NA | NA | NA | 7,058 | 418,752 | NA | NA | 418,752 |
| 1934----- | 384,964 | 65,492 | 450,456 | 7,588 | NA | NA | NA | 7,588 | 458,044 | NA | NA | 458,044 |
| 1935----- | 389,978 | 63,883 | 453,861 | 8,493 | NA | NA | NA | 8,493 | 462,354 | NA | NA | 462,354 |
| 1936----- | 405,027 | 66,572 | 471,599 | 10,901 | NA | NA | - | 10,901 | 482,500 | NA | NA | 482,500 |
| 1937----- | 413,136 | 65,940 | 479,076 | 11,695 | NA | NA | - | 11,695 | 490,771 | NA | NA | 490,771 |
| 1938----- | 373,271 | 60,624 | 433,895 | 11,351 | NA | NA | - | 11,351 | 445,246 | NA | NA | 445,246 |
| 1939----- | 370,791 | 61,405 | 432,196 | 12,848 | NA | NA | - | 12,848 | 445,044 | NA | NA | 445,044 |
| 1940----- | 366,000 | 60,608 | 426,608 | 14,239 | NA | NA | - | 14,239 | 440,847 | NA | NA | 440,847 |
| 1941----- | 374,953 | 64,186 | 439,139 | 18,605 | NA | NA | - | 18,605 | 457,744 | NA | NA | 457,744 |
| 1942----- | 361,061 | 67,383 | 428,444 | 20,353 | NA | NA | - | 20,353 | 448,797 | NA | NA | 448,797 |
| 1943----- | 318,776 | 65,315 | 384,091 | 23,044 | NA | - | - | 23,044 | 407,135 | NA | NA | 407,135 |
| 1944----- | 286,398 | 61,166 | 347,564 | 28,639 | NA | - | - | 28,639 | 376,203 | NA | NA | 376,203 |
| 1945----- | 274,341 | 60,110 | 334,451 | 30,546 | NA | - | - | 30,546 | 364,997 | NA | NA | 364,997 |
| 1946----- | 289,271 | 61,870 | 351,141 | 34,001 | NA | - | - | 34,001 | 385,142 | NA | NA | 385,142 |
| 1947----- | 308,563 | 64,803 | 373,366 | 38,479 | NA | - | - | 38,479 | 411,845 | NA | NA | 411,845 |
| 1948----- | 320,592 | 68,560 | 389,152 | 40,226 | NA | - | - | 40,226 | 429,378 | NA | NA | 429,378 |
| 1949----- | 306,138 | 65,685 | 371,823 | 37,608 | NA | - | - | 37,608 | 409,431 | NA | NA | 409,431 |
| 1950----- | 302,175 | 67,256 | 369,431 | 39,192 | NA | - | - | 39,192 | 408,623 | NA | NA | 408,623 |
| 1951----- | 275,019 | 62,264 | 337,283 | 34,855 | NA | - | - | 34,855 | 372,138 | NA | NA | 372,138 |
| 1952----- | 251,177 | 56,368 | 307,545 | 31,174 | NA | - | - | 31,174 | 338,719 | NA | NA | 338,719 |
| 1953----- | 216,161 | 49,748 | 265,909 | 29,516 | NA | - | - | 29,516 | 295,425 | NA | NA | 295,425 |
| 1954----- | 173,998 | 42,431 | 216,429 | 25,490 | NA | - | - | 25,490 | 241,919 | NA | NA | 241,919 |
| 1955----- | 160,360 | 38,903 | 199,263 | 25,150 | 1,126 | - | - | 26,276 | 225,539 | NA | NA | 225,539 |
| 1956----- | 161,359 | 38,665 | 200,024 | 25,929 | 1,825 | - | - | 27,754 | 227,778 | NA | NA | 227,778 |
| 1957----- | 158,258 | 38,448 | 196,706 | 25,321 | 1,873 | - | - | 27,194 | 223,900 | NA | NA | 223,900 |
| 1958----- | 134,716 | 36,809 | 171,525 | 24,979 | 1,846 | - | - | 26,825 | 198,350 | NA | NA | 198,350 |
| 1959----- | 123,083 | 31,621 | 154,704 | 23,697 | 1,902 | - | - | 25,599 | 180,303 | NA | NA | 180,303 |
| 1960----- | 115,702 | 29,717 | 145,419 | 23,178 | 2,031 | - | - | 25,209 | 170,628 | NA | NA | 170,628 |
| 1961----- | 101,904 | 26,316 | 128,220 | 21,747 | 1,809 | - | - | 23,556 | 151,776 | NA | NA | 151,776 |
| 1962----- | 98,008 | 25,453 | 123,461 | 21,709 | 2,106 | - | - | 23,815 | 147,276 | NA | NA | 147,276 |
| 1963----- | 95,193 | 24,217 | 119,410 | 21,745 | 2,473 | - | - | 24,218 | 143,628 | NA | NA | 143,628 |
| 1964----- | 91,506 | 22,442 | 113,948 | 21,387 | 2,282 | - | - | 23,669 | 137,617 | NA | NA | 137,617 |
| 1965----- | 91,982 | 21,669 | 113,651 | 21,865 | 2,086 | - | - | 23,951 | 137,602 | NA | NA | 137,602 |
| 1966----- | 90,069 | 14,969 | 105,038 | 19,803 | 2,494 | - | - | 22,297 | 127,335 | NA | 8,617 | 135,952 |
| 1967----- | 87,526 | 13,128 | 100,654 | 19,716 | 2,465 | - | - | 22,181 | 122,835 | NA | 8,727 | 131,562 |
| 1968----- | 84,690 | 11,544 | 96,234 | 20,074 | 2,435 | - | - | 22,509 | 118,743 | NA | 8,792 | 127,535 |
| 1969----- | 84,875 | 10,564 | 95,439 | 20,887 | 2,649 | - | - | 23,536 | 118,975 | NA | 8,400 | 127,375 |
| 1970----- | 90,404 | 10,096 | 100,500 | 25,932 | 3,316 | - | - | 29,248 | 129,748 | NA | 8,794 | 138,542 |
| 1971----- | 85,383 | 11,102 | 96,485 | 28,436 | 3,133 | - | - | 31,569 | 128,054 | NA | 9,026 | 137,080 |
| 1972----- | 97,475 | 11,059 | 108,534 | 30,809 | 2,373 | 17 | - | 33,199 | 141,733 | 1,850 | 13,702 | 157,285 |
| 1973----- | 90,634 | 9,673 | 100,307 | 27,754 | 1,421 | - | 5 | 29,180 | 129,487 | 2,519 | 11,880 | 143,886 |
| 1974----- | 101,350 | 11,384 | 112,734 | 41,257 | 1,980 | 27 | 5 | 43,269 | 156,003 | 2,776 | 14,809 | 173,588 |
| 1975----- | 121,334 | 15,150 | 136,484 | 54,514 | 1,798 | 147 | 204 | 56,663 | 193,147 | 3,367 | 18,490 | 215,004 |
| 1976----- | 122,453 | 14,329 | 136,782 | 53,514 | 1,198 | 121 | - | 54,833 | 191,615 | 3,664 | 16,192 | 211,471 |
| 1977----- | 126,377 | 14,522 | 140,899 | 62,807 | 1,172 | 132 | - | 64,111 | 205,010 | 3,841 | 18,468 | 227,319 |

NA Not available.

TABLE 10. - Man-hours worked, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 748,942,825 | 121,404,445 | 870,347,270 | 12,937,803 | NA | NA | NA | 12,937,803 | 883,285,073 | NA | NA | 883,285,073 |
| 1932-- | 586,132,753 | 100,475,824 | 686,608,577 | 12,515,960 | NA | NA | NA | 12,515,960 | 699,124,537 | NA | NA | 699,124,537 |
| 1933-- | 663,298,411 | 114,602,148 | 777,900,559 | 14,947,004 | NA | NA | NA | 14,947,004 | 792,847,563 | NA | NA | 792,847,563 |
| 1934-- | 716,843,966 | 122,331,583 | 839,175,549 | 16,311,413 | NA | NA | NA | 16,311,413 | 855,486,962 | NA | NA | 855,486,962 |
| 1935-- | 686,631,907 | 113,559,153 | 800,191,060 | 18,952,430 | NA | NA | NA | 18,952,430 | 819,143,490 | NA | NA | 819,143,490 |
| 1936-- | 775,208,054 | 128,135,195 | 903,343,249 | 22,637,174 | NA | NA | 324,430 | 22,961,604 | 926,304,853 | NA | NA | 926,304,853 |
| 1937-- | 767,651,412 | 120,743,894 | 888,395,306 | 23,503,493 | NA | NA | 536,068 | 24,039,561 | 912,434,867 | NA | NA | 912,434,867 |
| 1938-- | 578,325,001 | 95,883,400 | 674,208,401 | 21,025,425 | NA | NA | 365,941 | 21,391,366 | 695,599,767 | NA | NA | 695,599,767 |
| 1939-- | 631,174,468 | 104,581,660 | 735,756,128 | 23,868,726 | NA | NA | 414,564 | 24,283,290 | 760,039,418 | NA | NA | 760,039,418 |
| 1940-- | 698,853,920 | 112,722,489 | 811,576,409 | 28,232,634 | NA | NA | 607,720 | 28,840,354 | 840,416,763 | NA | NA | 840,416,763 |
| 1941-- | 759,404,938 | 125,420,024 | 884,824,962 | 35,879,513 | NA | NA | 831,447 | 36,710,960 | 921,535,922 | NA | NA | 921,535,922 |
| 1942-- | 831,601,025 | 146,940,808 | 978,541,833 | 41,609,413 | NA | NA | 927,114 | 42,536,527 | 1,021,078,360 | NA | NA | 1,021,078,360 |
| 1943-- | 821,831,745 | 160,434,661 | 982,266,406 | 48,438,060 | NA | 2,876,119 | 960,431 | 52,274,610 | 1,034,541,016 | NA | NA | 1,034,541,016 |
| 1944-- | 826,700,609 | 180,371,287 | 1,007,071,896 | 65,631,763 | NA | 4,689,976 | 1,080,742 | 71,402,481 | 1,078,474,377 | NA | NA | 1,078,474,377 |
| 1945-- | 723,548,050 | 163,758,454 | 887,306,504 | 67,688,593 | NA | 2,733,078 | 862,992 | 71,284,663 | 958,591,167 | NA | NA | 958,591,167 |
| 1946-- | 656,739,055 | 149,916,061 | 806,655,116 | 68,945,107 | NA | 3,131,884 | 896,087 | 72,973,078 | 879,628,194 | NA | NA | 879,628,194 |
| 1947-- | 712,134,852 | 156,591,912 | 868,726,764 | 77,334,619 | NA | 2,475,347 | 1,002,968 | 80,812,934 | 949,539,698 | NA | NA | 949,539,698 |
| 1948-- | 663,834,124 | 149,760,155 | 813,594,279 | 81,531,176 | NA | 2,222,329 | 882,937 | 84,636,442 | 898,230,721 | NA | NA | 898,230,721 |
| 1949-- | 470,728,130 | 108,192,444 | 578,920,574 | 61,450,815 | NA | 1,363,162 | 741,197 | 63,555,174 | 642,475,748 | NA | NA | 642,475,748 |
| 1950-- | 519,090,175 | 119,720,506 | 638,810,681 | 71,017,995 | NA | 1,213,308 | 347,573 | 72,578,876 | 711,389,557 | NA | NA | 711,389,557 |
| 1951-- | 511,978,524 | 118,238,100 | 630,216,624 | 65,935,063 | NA | 779,532 | 316,174 | 67,030,769 | 697,247,393 | NA | NA | 697,247,393 |
| 1952-- | 431,309,203 | 101,052,670 | 532,361,873 | 60,408,049 | NA | 607,513 | 320,875 | 61,336,437 | 593,698,310 | NA | NA | 593,698,310 |
| 1953-- | 369,242,524 | 88,859,506 | 458,102,030 | 54,405,852 | NA | 836,046 | 249,610 | 55,491,508 | 513,593,538 | NA | NA | 513,593,538 |
| 1954-- | 270,848,931 | 70,109,257 | 340,958,188 | 46,263,087 | NA | 539,309 | 189,631 | 46,992,027 | 387,950,215 | NA | NA | 387,950,215 |
| 1955-- | 294,013,251 | 73,949,395 | 367,962,646 | 49,262,500 | 1,502,084 | 437,277 | 214,108 | 51,415,969 | 419,378,615 | NA | NA | 419,378,615 |
| 1956-- | 299,085,138 | 76,130,615 | 375,215,753 | 54,221,469 | 2,685,664 | 1,253,678 | 285,279 | 58,446,090 | 433,661,843 | NA | NA | 433,661,843 |
| 1957-- | 280,614,185 | 66,246,064 | 346,860,249 | 52,050,907 | 2,358,783 | 1,204,586 | 235,568 | 55,849,844 | 402,710,093 | NA | 5,497,087 | 408,207,180 |
| 1958-- | 213,175,261 | 52,609,078 | 265,784,339 | 48,197,748 | 2,044,676 | 801,573 | 251,890 | 51,295,887 | 317,080,226 | NA | 5,148,589 | 322,228,815 |
| 1959-- | 192,630,346 | 49,399,560 | 242,029,906 | 46,556,136 | 1,933,575 | 680,824 | 252,311 | 49,422,846 | 291,452,752 | NA | 4,578,486 | 296,031,238 |
| 1960-- | 181,715,004 | 46,557,852 | 228,272,856 | 46,011,766 | 2,164,178 | 651,652 | 217,417 | 49,045,013 | 277,317,869 | NA | 4,209,958 | 281,527,827 |
| 1961-- | 163,106,195 | 42,508,874 | 205,615,069 | 43,038,045 | 1,879,406 | 568,152 | 247,606 | 45,733,209 | 251,348,278 | NA | 3,947,324 | 255,295,602 |
| 1962-- | 157,333,200 | 41,102,251 | 198,435,451 | 43,705,401 | 2,318,852 | 494,578 | 230,906 | 46,749,737 | 245,185,188 | NA | 3,761,187 | 248,946,375 |
| 1963-- | 159,240,677 | 41,181,521 | 200,422,198 | 45,318,532 | 2,798,202 | 527,159 | 208,776 | 48,852,669 | 249,274,867 | NA | 3,909,641 | 253,184,508 |
| 1964-- | 161,043,446 | 39,415,369 | 200,458,815 | 45,099,919 | 2,460,342 | 552,552 | 216,377 | 48,329,190 | 248,788,005 | NA | 3,616,545 | 252,404,550 |
| 1965-- | 159,465,278 | 38,221,602 | 197,686,880 | 45,105,063 | 2,379,825 | 485,904 | 192,575 | 48,163,367 | 245,850,247 | NA | 3,138,132 | 248,988,379 |
| 1966-- | 154,002,624 | 25,708,895 | 179,711,519 | 41,717,308 | 2,879,369 | 497,564 | 170,421 | 45,264,662 | 224,976,181 | NA | 18,782,824 | 243,759,005 |
| 1967-- | 153,436,875 | 23,496,419 | 176,933,294 | 42,311,617 | 2,735,248 | 615,846 | 147,314 | 45,810,025 | 222,743,319 | NA | 19,031,115 | 241,774,434 |
| 1968-- | 148,593,131 | 21,052,283 | 169,645,414 | 42,250,581 | 3,003,954 | 621,598 | 143,653 | 46,019,786 | 215,665,200 | NA | 18,751,720 | 234,416,920 |
| 1969-- | 151,985,482 | 19,402,828 | 171,388,310 | 44,282,952 | 3,050,098 | 591,488 | 143,323 | 48,067,861 | 219,456,171 | NA | 18,027,767 | 237,483,938 |
| 1970-- | 164,576,129 | 19,460,060 | 184,036,189 | 52,426,239 | 3,690,955 | 680,998 | 147,409 | 56,945,601 | 240,981,790 | NA | 19,187,416 | 260,169,206 |
| 1971-- | 153,801,537 | 19,192,511 | 172,994,048 | 58,940,951 | 3,776,796 | 616,034 | 84,449 | 63,418,230 | 236,412,278 | NA | 17,722,746 | 254,135,024 |
| 1972-- | 170,495,460 | 17,056,901 | 187,552,361 | 52,533,095 | 1,945,157 | 309,696 | 45,774 | 54,833,722 | 242,386,083 | 3,403,518 | 21,760,224 | 267,549,825 |
| 1973-- | 171,782,448 | 16,849,790 | 188,632,238 | 57,683,377 | 1,732,973 | 310,376 | 56,825 | 59,783,551 | 248,415,789 | 5,411,116 | 23,794,623 | 277,621,528 |
| 1974-- | 173,409,396 | 17,973,527 | 191,382,923 | 73,008,212 | 1,884,108 | 284,440 | 9,513 | 75,186,273 | 266,569,196 | 5,550,881 | 24,655,350 | 296,775,427 |
| 1975-- | 210,474,994 | 23,498,699 | 233,973,693 | 96,634,243 | 1,453,643 | 424,772 | 45,921 | 98,558,579 | 332,532,272 | 6,533,342 | 29,130,973 | 368,196,587 |
| 1976-- | 217,941,158 | 23,933,537 | 241,874,695 | 103,324,421 | 1,147,389 | 508,686 | 12,085 | 104,992,581 | 346,867,276 | 6,865,878 | 29,424,686 | 383,157,840 |
| 1977-- | 206,289,834 | 24,245,599 | 230,535,433 | 118,762,983 | 1,122,651 | 413,230 | 16,179 | 120,315,043 | 350,850,476 | 6,785,964 | 32,983,526 | 390,619,966 |

NA Not available.

TABLE 10A. - Man-hours worked, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 159,685,407 | 44,891,989 | 204,577,396 | 3,837,173 | | NA | NA | 3,837,173 | 208,414,569 | NA | NA | 208,414,569 |
| 1932-- | 119,217,854 | 34,062,944 | 153,280,798 | 3,663,201 | | NA | NA | 3,663,201 | 156,943,999 | NA | NA | 156,943,999 |
| 1933-- | 115,472,728 | 33,590,136 | 149,062,864 | 5,660,529 | | NA | NA | 5,660,529 | 154,723,393 | NA | NA | 154,723,393 |
| 1934-- | 134,350,568 | 37,057,015 | 171,407,583 | 6,964,498 | | NA | NA | 6,964,498 | 178,372,081 | NA | NA | 178,372,081 |
| 1935-- | 114,754,502 | 31,833,067 | 146,587,569 | 7,508,812 | | NA | NA | 7,508,812 | 154,096,381 | NA | NA | 154,096,381 |
| 1936-- | 115,556,143 | 33,102,050 | 148,658,193 | 7,503,301 | | NA | 324,430 | 7,827,731 | 156,485,924 | NA | NA | 156,485,924 |
| 1937-- | 101,567,961 | 27,774,391 | 129,342,352 | 5,975,531 | | NA | 536,068 | 6,511,599 | 135,853,951 | NA | NA | 135,853,951 |
| 1938-- | 86,548,574 | 24,221,448 | 110,770,022 | 4,716,324 | | NA | 365,941 | 5,082,265 | 115,852,287 | NA | NA | 115,852,287 |
| 1939-- | 91,365,686 | 26,244,223 | 117,609,909 | 5,186,770 | | NA | 414,564 | 5,601,334 | 123,211,243 | NA | NA | 123,211,243 |
| 1940-- | 90,512,425 | 25,222,421 | 115,734,846 | 6,104,749 | | NA | 607,720 | 6,712,469 | 122,447,315 | NA | NA | 122,447,315 |
| 1941-- | 95,789,822 | 27,318,651 | 123,108,473 | 6,167,485 | | NA | 831,447 | 6,998,932 | 130,107,405 | NA | NA | 130,107,405 |
| 1942-- | 99,439,274 | 30,572,023 | 130,011,297 | 6,621,583 | | NA | 927,114 | 7,548,697 | 137,559,994 | NA | NA | 137,559,994 |
| 1943-- | 105,258,931 | 34,005,493 | 139,264,424 | 7,731,034 | | 2,876,119 | 960,431 | 11,567,584 | 150,832,008 | NA | NA | 150,832,008 |
| 1944-- | 107,243,042 | 40,053,588 | 147,296,630 | 10,481,739 | | 4,689,976 | 1,080,742 | 16,252,457 | 163,549,087 | NA | NA | 163,549,087 |
| 1945-- | 92,252,695 | 36,186,679 | 128,439,374 | 9,239,525 | | 2,733,078 | 862,992 | 12,835,595 | 141,274,969 | NA | NA | 141,274,969 |
| 1946-- | 99,497,367 | 37,336,862 | 136,834,229 | 10,771,050 | | 3,131,884 | 896,087 | 14,799,021 | 151,633,250 | NA | NA | 151,633,250 |
| 1947-- | 97,424,631 | 34,730,557 | 132,155,188 | 10,889,857 | | 2,475,347 | 1,002,968 | 14,368,172 | 146,523,360 | NA | NA | 146,523,360 |
| 1948-- | 100,565,199 | 35,350,752 | 135,915,951 | 11,523,771 | | 2,222,329 | 882,937 | 14,629,037 | 150,544,988 | NA | NA | 150,544,988 |
| 1949-- | 72,432,875 | 26,128,886 | 98,561,761 | 8,644,106 | | 1,363,162 | 741,197 | 10,748,465 | 109,310,226 | NA | NA | 109,310,226 |
| 1950-- | 76,750,937 | 27,001,449 | 103,752,386 | 11,240,415 | | 1,213,308 | 347,573 | 12,801,296 | 116,553,682 | NA | NA | 116,553,682 |
| 1951-- | 68,666,920 | 26,318,752 | 94,985,672 | 10,759,622 | | 779,532 | 316,174 | 11,855,328 | 106,841,000 | NA | NA | 106,841,000 |
| 1952-- | 60,939,199 | 23,475,423 | 84,414,622 | 10,441,235 | | 607,513 | 320,875 | 11,369,623 | 95,784,245 | NA | NA | 95,784,245 |
| 1953-- | 41,445,701 | 18,589,392 | 60,035,093 | 8,153,950 | | 836,046 | 249,610 | 9,239,606 | 69,274,699 | NA | NA | 69,274,699 |
| 1954-- | 28,873,117 | 14,558,885 | 43,432,002 | 6,062,054 | | 539,309 | 189,631 | 6,790,994 | 50,222,996 | NA | NA | 50,222,996 |
| 1955-- | 26,952,904 | 12,202,202 | 39,155,106 | 6,188,271 | | 437,277 | 214,108 | 6,839,656 | 45,994,762 | NA | NA | 45,994,762 |
| 1956-- | 27,673,009 | 13,587,081 | 41,260,090 | 7,420,579 | | 1,253,678 | 285,279 | 8,959,536 | 50,219,626 | NA | NA | 50,219,626 |
| 1957-- | 23,915,335 | 6,763,428 | 30,678,763 | 6,695,265 | | 1,204,586 | 235,568 | 8,135,419 | 38,814,182 | NA | 5,497,087 | 44,311,269 |
| 1958-- | 17,735,303 | 5,458,992 | 23,194,295 | 6,074,662 | | 801,573 | 251,890 | 7,128,125 | 30,322,420 | NA | 5,148,589 | 35,471,009 |
| 1959-- | 13,959,293 | 4,566,555 | 18,525,848 | 5,333,838 | | 680,824 | 252,311 | 6,266,973 | 24,792,821 | NA | 4,578,486 | 29,371,307 |
| 1960-- | 10,855,931 | 3,749,577 | 14,605,508 | 4,767,847 | | 651,652 | 217,417 | 5,636,916 | 20,242,424 | NA | 4,209,958 | 24,452,382 |
| 1961-- | 9,267,435 | 3,700,796 | 12,968,231 | 4,692,972 | | 568,152 | 247,606 | 5,508,730 | 18,476,961 | NA | 3,947,324 | 22,424,285 |
| 1962-- | 8,461,822 | 3,290,472 | 11,752,294 | 4,440,797 | | 494,578 | 230,906 | 5,166,281 | 16,918,575 | NA | 3,761,187 | 20,679,762 |
| 1963-- | 8,425,591 | 3,154,260 | 11,579,851 | 4,822,806 | | 527,159 | 208,776 | 5,558,741 | 17,138,592 | NA | 3,909,641 | 21,048,233 |
| 1964-- | 8,291,730 | 2,914,235 | 11,205,965 | 4,776,258 | | 552,552 | 216,377 | 5,545,187 | 16,751,152 | NA | 3,616,545 | 20,367,697 |
| 1965-- | 6,443,993 | 2,489,882 | 8,933,875 | 3,624,873 | | 485,904 | 192,575 | 4,303,352 | 13,237,227 | NA | 3,138,132 | 16,375,359 |
| 1966-- | 4,550,379 | 2,164,476 | 6,714,855 | 3,333,266 | | 497,564 | 170,421 | 4,001,251 | 10,716,106 | NA | 2,955,760 | 13,671,866 |
| 1967-- | 3,555,616 | 1,861,096 | 5,416,712 | 3,179,230 | | 615,846 | 147,314 | 3,942,390 | 9,359,102 | NA | 3,000,191 | 12,359,293 |
| 1968-- | 2,666,212 | 1,423,747 | 4,089,959 | 3,261,788 | | 621,598 | 143,653 | 4,027,039 | 8,116,998 | NA | 2,894,241 | 11,011,239 |
| 1969-- | 2,304,477 | 961,956 | 3,266,433 | 3,319,319 | | 591,488 | 143,323 | 4,054,130 | 7,320,563 | NA | 2,751,967 | 10,072,530 |
| 1970-- | 2,169,220 | 784,026 | 2,953,246 | 3,610,152 | | 680,998 | 147,409 | 4,438,559 | 7,391,805 | NA | 2,832,005 | 10,223,810 |
| 1971-- | 1,564,502 | 514,770 | 2,079,272 | 3,616,498 | | 616,034 | 84,449 | 4,316,981 | 6,396,253 | NA | 2,918,940 | 9,315,193 |
| 1972-- | 772,412 | 216,940 | 989,352 | 2,640,181 | | 301,932 | 45,774 | 2,987,887 | 3,977,239 | 77,926 | 2,156,452 | 6,211,617 |
| 1973-- | 752,549 | 186,864 | 939,413 | 2,287,116 | | 310,376 | 47,669 | 2,645,161 | 3,584,574 | 292,258 | 2,169,208 | 6,046,040 |
| 1974-- | 533,315 | 113,851 | 647,166 | 2,050,650 | | 268,567 | 494 | 2,319,711 | 2,966,877 | 200,993 | 1,935,520 | 5,103,390 |
| 1975-- | 666,075 | 112,773 | 778,848 | 2,023,147 | | 250,580 | 4,805 | 2,278,532 | 3,057,380 | 157,793 | 1,731,421 | 4,946,594 |
| 1976-- | 639,461 | 118,070 | 807,531 | 2,121,292 | | 303,637 | 12,085 | 2,437,014 | 3,244,545 | 154,081 | 1,774,090 | 5,172,716 |
| 1977-- | 563,294 | 102,180 | 665,474 | 2,195,043 | | 215,325 | 16,179 | 2,426,547 | 3,092,021 | 143,652 | 1,950,788 | 5,186,461 |

SURFACE AUGER MINING NOT REPORTED

NA Not available.

TABLE 10B. - Man-hours worked, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 589,257,418 | 76,512,456 | 665,769,874 | 9,100,630 | NA | NA | NA | 9,100,630 | 674,870,504 | NA | NA | 674,870,504 |
| 1932-- | 466,914,899 | 66,412,880 | 533,327,779 | 8,852,759 | NA | NA | NA | 8,852,759 | 542,180,538 | NA | NA | 542,180,538 |
| 1933-- | 547,825,683 | 81,012,012 | 628,837,695 | 9,286,475 | NA | NA | NA | 9,286,475 | 638,124,170 | NA | NA | 638,124,170 |
| 1934-- | 582,493,398 | 85,274,568 | 667,767,966 | 9,346,915 | NA | NA | NA | 9,346,915 | 677,114,881 | NA | NA | 677,114,881 |
| 1935-- | 571,877,405 | 81,726,086 | 653,603,491 | 11,443,618 | NA | NA | NA | 11,443,618 | 665,047,109 | NA | NA | 665,047,109 |
| 1936-- | 659,651,911 | 95,033,145 | 754,685,056 | 15,133,873 | NA | NA | - | 15,133,873 | 769,818,929 | NA | NA | 769,818,929 |
| 1937-- | 666,083,451 | 92,969,503 | 759,052,954 | 17,527,962 | NA | NA | - | 17,527,962 | 776,580,916 | NA | NA | 776,580,916 |
| 1938-- | 491,776,427 | 71,661,952 | 563,438,379 | 16,309,101 | NA | NA | - | 16,309,101 | 579,747,480 | NA | NA | 579,747,480 |
| 1939-- | 539,808,782 | 78,337,437 | 618,146,219 | 18,681,956 | NA | NA | - | 18,681,956 | 636,828,175 | NA | NA | 636,828,175 |
| 1940-- | 608,341,495 | 87,500,068 | 695,841,563 | 22,127,885 | NA | NA | - | 22,127,885 | 717,969,448 | NA | NA | 717,969,448 |
| 1941-- | 663,615,116 | 98,101,373 | 761,716,489 | 29,712,028 | NA | NA | - | 29,712,028 | 791,428,517 | NA | NA | 791,428,517 |
| 1942-- | 732,161,751 | 116,368,785 | 848,530,536 | 34,987,830 | NA | NA | - | 34,987,830 | 883,518,366 | NA | NA | 883,518,366 |
| 1943-- | 716,572,814 | 126,429,168 | 843,001,982 | 40,707,026 | NA | - | - | 40,707,026 | 883,709,008 | NA | NA | 883,709,008 |
| 1944-- | 719,457,567 | 140,317,699 | 859,775,266 | 55,150,024 | NA | - | - | 55,150,024 | 914,925,290 | NA | NA | 914,925,290 |
| 1945-- | 631,295,355 | 127,571,775 | 758,867,130 | 58,449,068 | NA | - | - | 58,449,068 | 817,316,198 | NA | NA | 817,316,198 |
| 1946-- | 557,241,688 | 112,579,199 | 669,820,887 | 58,174,057 | NA | - | - | 58,174,057 | 727,994,944 | NA | NA | 727,994,944 |
| 1947-- | 614,710,221 | 121,861,355 | 736,571,576 | 66,444,762 | NA | - | - | 66,444,762 | 803,016,338 | NA | NA | 803,016,338 |
| 1948-- | 563,268,925 | 114,409,403 | 677,678,328 | 70,007,405 | NA | - | - | 70,007,405 | 747,685,733 | NA | NA | 747,685,733 |
| 1949-- | 398,295,255 | 82,063,558 | 480,358,813 | 52,806,709 | NA | - | - | 52,806,709 | 533,165,522 | NA | NA | 533,165,522 |
| 1950-- | 442,339,238 | 92,719,057 | 535,058,295 | 59,777,580 | NA | - | - | 59,777,580 | 594,835,875 | NA | NA | 594,835,875 |
| 1951-- | 443,311,604 | 91,919,348 | 535,230,952 | 55,175,441 | NA | - | - | 55,175,441 | 590,406,393 | NA | NA | 590,406,393 |
| 1952-- | 370,370,004 | 77,577,247 | 447,947,251 | 49,966,814 | NA | - | - | 49,966,814 | 497,914,065 | NA | NA | 497,914,065 |
| 1953-- | 327,796,823 | 70,270,114 | 398,066,937 | 46,251,902 | NA | - | - | 46,251,902 | 444,318,839 | NA | NA | 444,318,839 |
| 1954-- | 241,975,814 | 55,550,372 | 297,526,186 | 40,201,033 | NA | - | - | 40,201,033 | 337,727,219 | NA | NA | 337,727,219 |
| 1955-- | 267,060,347 | 61,747,193 | 328,807,540 | 43,074,229 | 1,502,084 | - | - | 44,576,313 | 373,383,853 | NA | NA | 373,383,853 |
| 1956-- | 271,412,129 | 62,543,534 | 333,955,663 | 46,800,890 | 2,685,664 | - | - | 49,486,554 | 383,442,217 | NA | NA | 383,442,217 |
| 1957-- | 256,698,850 | 59,482,636 | 316,181,486 | 45,355,642 | 2,358,783 | - | - | 47,714,425 | 363,895,911 | NA | NA | 363,895,911 |
| 1958-- | 195,439,958 | 47,150,086 | 242,590,044 | 42,123,086 | 2,044,676 | - | - | 44,167,762 | 286,757,806 | NA | NA | 286,757,806 |
| 1959-- | 178,671,053 | 44,833,005 | 223,504,058 | 41,222,298 | 1,933,575 | - | - | 43,155,873 | 266,659,931 | NA | NA | 266,659,931 |
| 1960-- | 170,859,073 | 42,808,275 | 213,667,348 | 41,243,919 | 2,164,178 | - | - | 43,408,097 | 257,075,445 | NA | NA | 257,075,445 |
| 1961-- | 153,838,760 | 38,808,078 | 192,646,838 | 38,345,073 | 1,879,406 | - | - | 40,224,479 | 232,871,317 | NA | NA | 232,871,317 |
| 1962-- | 148,871,378 | 37,811,779 | 186,683,157 | 39,264,604 | 2,318,852 | - | - | 41,583,456 | 228,266,613 | NA | NA | 228,266,613 |
| 1963-- | 150,815,086 | 38,027,261 | 188,842,347 | 40,495,726 | 2,798,202 | - | - | 43,293,928 | 232,136,275 | NA | NA | 232,136,275 |
| 1964-- | 152,751,716 | 36,501,134 | 189,252,850 | 40,323,661 | 2,460,342 | - | - | 42,784,003 | 232,036,853 | NA | NA | 232,036,853 |
| 1965-- | 153,021,285 | 35,731,720 | 188,753,005 | 41,480,190 | 2,379,825 | - | - | 43,860,015 | 232,613,020 | NA | NA | 232,613,020 |
| 1966-- | 149,452,245 | 23,544,419 | 172,996,664 | 38,384,042 | 2,879,369 | - | - | 41,263,411 | 214,260,075 | NA | 15,827,064 | 230,087,139 |
| 1967-- | 149,881,259 | 21,635,323 | 171,516,582 | 39,132,387 | 2,735,248 | - | - | 41,867,635 | 213,384,217 | NA | 16,030,924 | 229,415,141 |
| 1968-- | 145,926,919 | 19,628,536 | 165,555,455 | 38,988,793 | 3,003,954 | - | - | 41,992,747 | 207,548,202 | NA | 15,857,479 | 223,405,681 |
| 1969-- | 149,681,005 | 18,440,872 | 168,121,877 | 40,963,633 | 3,050,098 | - | - | 44,013,731 | 212,135,608 | NA | 15,275,800 | 227,411,408 |
| 1970-- | 162,406,909 | 18,676,034 | 181,082,943 | 48,816,087 | 3,690,955 | - | - | 52,507,042 | 233,589,985 | NA | 16,355,411 | 249,945,396 |
| 1971-- | 152,237,035 | 18,677,741 | 170,914,776 | 55,324,453 | 3,776,796 | - | - | 59,101,249 | 230,016,025 | NA | 14,803,806 | 244,819,831 |
| 1972-- | 169,723,048 | 16,839,961 | 186,563,009 | 49,892,914 | 1,945,157 | 7,764 | - | 51,845,835 | 238,408,844 | 3,325,592 | 19,603,772 | 261,338,208 |
| 1973-- | 171,029,899 | 16,662,926 | 187,692,825 | 55,396,261 | 1,732,973 | - | 9,156 | 57,138,390 | 244,831,215 | 5,118,858 | 21,625,415 | 271,575,488 |
| 1974-- | 172,876,081 | 17,859,676 | 190,735,757 | 70,957,562 | 1,884,108 | 15,873 | 9,019 | 72,866,562 | 263,602,319 | 5,349,888 | 22,719,830 | 291,672,037 |
| 1975-- | 209,808,919 | 23,385,926 | 233,194,845 | 94,611,096 | 1,453,643 | 174,192 | 41,116 | 96,280,047 | 329,474,892 | 6,375,549 | 27,399,552 | 363,249,993 |
| 1976-- | 217,251,697 | 23,815,467 | 241,067,164 | 101,203,129 | 1,147,389 | 205,049 | - | 102,555,567 | 343,622,731 | 6,711,797 | 27,650,596 | 377,985,124 |
| 1977-- | 205,726,540 | 24,143,419 | 229,869,959 | 116,567,940 | 1,122,651 | 197,905 | - | 117,888,496 | 347,758,455 | 6,642,312 | 31,032,738 | 385,433,505 |

NA Not available.

TABLE 11. - Production in short tons, by general work location, at all coal mines in the United States, 1931-77 1/

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 416,718,433 | - | 416,718,433 | 25,032,545 | NA | NA | NA | 25,032,545 | 441,750,978 | NA | NA | 441,750,978 |
| 1932-- | 333,893,739 | - | 333,693,739 | 25,671,354 | NA | NA | NA | 25,671,354 | 359,565,093 | NA | NA | 359,565,093 |
| 1933-- | 356,359,179 | - | 356,359,179 | 26,812,698 | NA | NA | NA | 26,812,698 | 383,171,877 | NA | NA | 383,171,877 |
| 1934-- | 387,150,296 | - | 387,150,296 | 29,386,017 | NA | NA | NA | 29,386,017 | 416,536,313 | NA | NA | 416,536,313 |
| 1935-- | 392,504,706 | - | 392,504,706 | 32,127,299 | NA | NA | NA | 32,127,299 | 424,632,005 | NA | NA | 424,632,005 |
| 1936-- | 453,977,317 | - | 453,977,317 | 36,614,761 | NA | NA | 546,684 | 37,161,445 | 491,138,762 | NA | NA | 491,138,762 |
| 1937-- | 457,991,826 | - | 457,991,826 | 40,040,628 | NA | NA | 760,474 | 40,801,102 | 498,792,928 | NA | NA | 498,792,928 |
| 1938-- | 357,384,689 | - | 357,384,689 | 37,740,919 | NA | NA | 571,024 | 38,311,943 | 395,696,632 | NA | NA | 395,696,632 |
| 1939-- | 401,942,282 | - | 401,942,282 | 45,330,497 | NA | NA | 703,860 | 46,034,357 | 447,976,639 | NA | NA | 447,976,639 |
| 1940-- | 460,471,033 | - | 460,471,033 | 51,395,759 | NA | NA | 941,327 | 52,337,086 | 512,808,119 | NA | NA | 512,808,119 |
| 1941-- | 502,018,940 | - | 502,018,940 | 66,387,804 | NA | NA | 1,477,465 | 67,865,269 | 569,884,209 | NA | NA | 569,884,209 |
| 1942-- | 560,561,752 | - | 560,561,752 | 78,084,133 | NA | NA | 1,374,977 | 79,459,110 | 640,020,862 | NA | NA | 640,020,862 |
| 1943-- | 556,266,384 | - | 556,266,384 | 89,191,381 | NA | 6,193,785 | 1,325,479 | 96,710,645 | 652,977,029 | NA | NA | 652,977,029 |
| 1944-- | 561,629,831 | - | 561,629,831 | 112,659,382 | NA | 9,293,566 | 1,367,210 | 123,320,158 | 684,949,989 | NA | NA | 684,949,989 |
| 1945-- | 502,489,349 | - | 502,489,349 | 118,997,299 | NA | 8,829,567 | 1,207,180 | 129,034,046 | 631,523,395 | NA | NA | 631,523,395 |
| 1946-- | 459,788,162 | - | 459,788,162 | 124,834,521 | NA | 8,248,271 | 1,105,343 | 134,188,135 | 593,976,297 | NA | NA | 593,976,297 |
| 1947-- | 530,913,345 | - | 530,913,345 | 146,618,583 | NA | 6,430,185 | 1,199,894 | 154,248,662 | 685,162,007 | NA | NA | 685,162,007 |
| 1948-- | 494,355,070 | - | 494,355,070 | 148,877,291 | NA | 5,755,540 | 1,015,079 | 155,647,910 | 650,002,980 | NA | NA | 650,002,980 |
| 1949-- | 357,550,429 | - | 357,550,429 | 116,262,831 | NA | 4,228,940 | 877,543 | 121,369,314 | 478,919,743 | NA | NA | 478,919,743 |
| 1950-- | 424,710,888 | - | 424,710,888 | 135,446,831 | NA | 1,737,978 | 409,327 | 137,594,136 | 562,305,024 | NA | NA | 562,305,024 |
| 1951-- | 444,005,016 | - | 444,005,016 | 128,799,116 | NA | 1,814,077 | 341,903 | 130,955,096 | 574,960,112 | NA | NA | 574,960,112 |
| 1952-- | 383,519,654 | - | 383,519,654 | 124,787,858 | NA | 1,774,236 | 385,389 | 126,447,483 | 509,967,137 | NA | NA | 509,967,137 |
| 1953-- | 367,327,424 | - | 367,327,424 | 116,528,818 | NA | 2,259,517 | 288,061 | 119,076,396 | 486,403,820 | NA | NA | 486,403,820 |
| 1954-- | 306,017,881 | - | 306,017,881 | 111,166,931 | NA | 3,236,493 | 463,851 | 114,867,275 | 420,885,156 | NA | NA | 420,885,156 |
| 1955-- | 359,612,537 | - | 359,612,537 | 124,362,826 | 3,692,423 | 3,193,830 | 606,011 | 131,855,090 | 491,467,627 | NA | NA | 491,467,627 |
| 1956-- | 378,748,465 | - | 378,748,465 | 137,435,774 | 7,823,275 | 3,776,493 | 662,792 | 149,698,334 | 528,446,799 | NA | NA | 528,446,799 |
| 1957-- | 370,683,866 | - | 370,683,866 | 130,808,650 | 8,017,743 | 4,542,694 | 652,738 | 144,021,825 | 514,705,691 | NA | - | 514,705,691 |
| 1958-- | 297,333,434 | - | 297,333,434 | 123,915,428 | 7,244,021 | 3,011,507 | 691,792 | 134,862,748 | 432,196,182 | NA | - | 432,196,182 |
| 1959-- | 293,291,026 | - | 293,291,026 | 127,913,691 | 7,227,767 | 3,425,344 | 716,619 | 139,283,421 | 432,574,447 | NA | - | 432,574,447 |
| 1960-- | 293,029,410 | - | 293,029,410 | 130,053,426 | 7,906,777 | 3,321,755 | 724,500 | 142,006,458 | 435,035,868 | NA | - | 435,035,868 |
| 1961-- | 279,595,340 | - | 279,595,340 | 129,759,645 | 7,975,984 | 2,653,814 | 744,194 | 141,133,637 | 420,728,977 | NA | - | 420,728,977 |
| 1962-- | 287,995,378 | - | 287,995,378 | 137,681,375 | 10,769,478 | 2,798,544 | 727,051 | 151,976,448 | 439,971,826 | NA | - | 439,971,826 |
| 1963-- | 308,711,417 | - | 308,711,417 | 153,403,158 | 12,422,052 | 3,400,990 | 691,730 | 169,917,930 | 478,629,347 | NA | - | 478,629,347 |
| 1964-- | 328,331,873 | - | 328,331,873 | 160,001,866 | 13,025,732 | 3,508,089 | 705,248 | 177,240,935 | 505,572,808 | NA | - | 505,572,808 |
| 1965-- | 337,977,049 | - | 337,977,049 | 172,092,980 | 14,285,371 | 2,937,184 | 700,457 | 190,015,992 | 527,993,041 | NA | - | 527,993,041 |
| 1966-- | 342,325,509 | - | 342,325,509 | 184,461,222 | 15,071,139 | 2,950,325 | 655,617 | 203,138,303 | 545,463,812 | NA | - | 545,463,812 |
| 1967-- | 350,374,100 | - | 350,374,100 | 190,268,662 | 15,858,604 | 3,631,346 | 631,660 | 210,390,272 | 560,764,372 | NA | - | 560,764,372 |
| 1968-- | 344,630,387 | - | 344,630,387 | 189,378,478 | 15,011,311 | 3,714,194 | 605,920 | 208,709,903 | 553,340,290 | NA | - | 553,340,290 |
| 1969-- | 347,670,116 | - | 347,670,116 | 201,897,128 | 15,930,018 | 3,149,484 | 535,369 | 221,511,999 | 569,182,115 | NA | - | 569,182,115 |
| 1970-- | 339,562,040 | - | 339,562,040 | 248,172,928 | 18,585,471 | 3,073,093 | 409,724 | 270,241,216 | 609,803,256 | NA | - | 609,803,256 |
| 1971-- | 278,011,258 | - | 278,011,258 | 264,423,535 | 17,322,391 | 2,572,865 | 390,174 | 284,708,965 | 562,720,223 | NA | - | 562,720,223 |
| 1972-- | 287,714,237 | - | 287,714,237 | 235,830,862 | 8,872,231 | 1,814,515 | 354,228 | 246,871,836 | 534,586,073 | - | - | 534,586,073 |
| 1973-- | 285,873,030 | - | 285,873,030 | 260,807,218 | 8,884,179 | 2,058,595 | 326,422 | 272,076,414 | 557,949,444 | - | - | 557,949,444 |
| 1974-- | 263,962,854 | - | 263,962,854 | 292,572,423 | 7,570,911 | 1,644,681 | 22,794 | 301,810,809 | 565,773,663 | - | - | 565,773,663 |
| 1975-- | 278,649,145 | - | 278,649,145 | 324,443,943 | 4,610,911 | 3,378,169 | 48,155 | 332,481,178 | 611,130,323 | - | - | 611,130,323 |
| 1976-- | 281,031,488 | - | 281,031,488 | 358,469,458 | 4,616,597 | 2,961,873 | 7,500 | 366,055,428 | 647,086,916 | - | - | 647,086,916 |
| 1977-- | 257,461,857 | - | 257,461,857 | 406,362,921 | 4,212,494 | 2,639,210 | 7,329 | 413,221,954 | 670,683,811 | - | - | 670,683,811 |

NA Not available.

1/ Raw coal is not produced at the work locations of surface at underground, shops and yards, and mechanical cleaning plants.

TABLE 11A. - Production in short tons, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77 1/

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 53,464,806 | - | 53,464,806 | 6,180,846 | SURFACE AUGER MINING NOT REPORTED | NA | NA | 6,180,846 | 59,645,652 | NA | NA | 59,645,652 |
| 1932-- | 43,826,027 | - | 43,826,027 | 6,029,194 | | NA | NA | 6,029,194 | 49,855,221 | NA | NA | 49,855,221 |
| 1933-- | 40,965,553 | - | 40,965,553 | 8,575,791 | | NA | NA | 8,575,791 | 49,541,344 | NA | NA | 49,541,344 |
| 1934-- | 48,574,741 | - | 48,574,741 | 8,593,550 | | NA | NA | 8,593,550 | 57,168,291 | NA | NA | 57,168,291 |
| 1935-- | 43,782,876 | - | 43,782,876 | 8,480,007 | | NA | NA | 8,480,007 | 52,262,883 | NA | NA | 52,262,883 |
| 1936-- | 44,726,506 | - | 44,726,506 | 9,397,239 | | NA | 546,684 | 9,943,923 | 54,670,429 | NA | NA | 54,670,429 |
| 1937-- | 42,566,351 | - | 42,566,351 | 8,418,617 | | NA | 760,474 | 9,179,091 | 51,745,442 | NA | NA | 51,745,442 |
| 1938-- | 38,142,297 | - | 38,142,297 | 7,435,785 | | NA | 571,024 | 8,006,809 | 46,149,106 | NA | NA | 46,149,106 |
| 1939-- | 42,571,548 | - | 42,571,548 | 8,070,293 | | NA | 703,860 | 8,774,153 | 51,345,701 | NA | NA | 51,345,701 |
| 1940-- | 41,510,718 | - | 41,510,718 | 9,037,445 | | NA | 941,327 | 9,978,772 | 51,489,490 | NA | NA | 51,489,490 |
| 1941-- | 41,727,430 | - | 41,727,430 | 10,910,066 | | NA | 1,477,465 | 12,387,531 | 54,114,961 | NA | NA | 54,114,961 |
| 1942-- | 44,339,388 | - | 44,339,388 | 12,601,657 | | NA | 1,374,977 | 13,976,634 | 58,316,022 | NA | NA | 58,316,022 |
| 1943-- | 42,615,546 | - | 42,615,546 | 9,370,856 | | 6,193,785 | 1,325,479 | 16,890,120 | 59,505,666 | NA | NA | 59,505,666 |
| 1944-- | 41,714,699 | - | 41,714,699 | 11,216,153 | | 9,293,566 | 1,367,210 | 21,876,929 | 63,591,628 | NA | NA | 63,591,628 |
| 1945-- | 34,941,857 | - | 34,941,857 | 10,020,087 | | 8,829,567 | 1,207,180 | 20,056,834 | 54,998,691 | NA | NA | 54,998,691 |
| 1946-- | 38,122,230 | - | 38,122,230 | 12,980,384 | | 8,248,271 | 1,105,343 | 22,333,998 | 60,456,228 | NA | NA | 60,456,228 |
| 1947-- | 36,772,464 | - | 36,772,464 | 12,725,512 | | 6,430,185 | 1,199,894 | 20,355,591 | 57,128,055 | NA | NA | 57,128,055 |
| 1948-- | 36,982,049 | - | 36,982,049 | 13,327,064 | | 5,755,540 | 1,015,079 | 20,097,683 | 57,079,732 | NA | NA | 57,079,732 |
| 1949-- | 27,358,553 | - | 27,358,553 | 10,736,092 | | 4,228,940 | 877,543 | 15,842,575 | 43,201,128 | NA | NA | 43,201,128 |
| 1950-- | 29,923,465 | - | 29,923,465 | 12,355,609 | | 1,737,978 | 409,327 | 14,502,914 | 44,426,379 | NA | NA | 44,426,379 |
| 1951-- | 26,325,342 | - | 26,325,342 | 13,347,006 | | 1,814,077 | 341,903 | 15,502,986 | 41,828,328 | NA | NA | 41,828,328 |
| 1952-- | 24,655,753 | - | 24,655,753 | 13,779,140 | | 1,774,236 | 385,389 | 15,938,765 | 40,594,518 | NA | NA | 40,594,518 |
| 1953-- | 18,033,423 | - | 18,033,423 | 9,937,358 | | 2,259,517 | 288,061 | 12,484,936 | 30,518,359 | NA | NA | 30,518,359 |
| 1954-- | 15,496,561 | - | 15,496,561 | 9,735,754 | | 3,236,493 | 463,851 | 13,436,098 | 28,932,659 | NA | NA | 28,932,659 |
| 1955-- | 15,840,768 | - | 15,840,768 | 9,307,637 | | 3,193,830 | 606,011 | 13,107,478 | 28,948,246 | NA | NA | 28,948,246 |
| 1956-- | 16,908,361 | - | 16,908,361 | 10,868,591 | | 3,776,493 | 662,792 | 15,307,876 | 32,216,237 | NA | NA | 32,216,237 |
| 1957-- | 12,796,086 | - | 12,796,086 | 7,538,873 | | 4,542,694 | 652,738 | 12,734,305 | 25,530,391 | NA | - | 25,530,391 |
| 1958-- | 10,431,816 | - | 10,431,816 | 7,125,302 | | 3,011,507 | 691,792 | 10,828,601 | 21,260,417 | NA | - | 21,260,417 |
| 1959-- | 9,307,619 | - | 9,307,619 | 7,046,370 | | 3,425,344 | 716,619 | 11,188,333 | 20,495,952 | NA | - | 20,495,952 |
| 1960-- | 7,747,099 | - | 7,747,099 | 7,144,309 | | 3,321,755 | 724,500 | 11,190,564 | 18,937,663 | NA | - | 18,937,663 |
| 1961-- | 6,852,202 | - | 6,852,202 | 7,256,615 | | 2,653,814 | 744,194 | 10,654,623 | 17,506,825 | NA | - | 17,506,825 |
| 1962-- | 6,739,537 | - | 6,739,537 | 6,868,267 | | 2,798,544 | 727,051 | 10,393,862 | 17,133,399 | NA | - | 17,133,399 |
| 1963-- | 6,781,514 | - | 6,781,514 | 7,469,676 | | 3,400,990 | 691,730 | 11,562,396 | 18,343,910 | NA | - | 18,343,910 |
| 1964-- | 6,059,651 | - | 6,059,651 | 7,213,888 | | 3,508,089 | 705,248 | 11,427,225 | 17,486,876 | NA | - | 17,486,876 |
| 1965-- | 5,306,215 | - | 5,306,215 | 5,965,481 | | 2,937,184 | 700,457 | 9,603,122 | 14,909,337 | NA | - | 14,909,337 |
| 1966-- | 4,079,349 | - | 4,079,349 | 5,219,902 | | 2,950,325 | 655,617 | 8,825,844 | 12,905,193 | NA | - | 12,905,193 |
| 1967-- | 3,256,989 | - | 3,256,989 | 4,741,796 | | 3,631,346 | 631,660 | 9,004,802 | 12,261,791 | NA | - | 12,261,791 |
| 1968-- | 2,473,108 | - | 2,473,108 | 4,698,317 | | 3,714,194 | 605,920 | 9,018,431 | 11,491,539 | NA | - | 11,491,539 |
| 1969-- | 2,066,463 | - | 2,066,463 | 4,499,849 | | 3,149,484 | 535,369 | 8,184,702 | 10,251,165 | NA | - | 10,251,165 |
| 1970-- | 1,686,641 | - | 1,686,641 | 4,715,873 | | 3,073,093 | 409,724 | 8,198,690 | 9,885,331 | NA | - | 9,885,331 |
| 1971-- | 1,286,390 | - | 1,286,390 | 4,477,913 | | 2,572,865 | 390,174 | 7,440,952 | 8,727,342 | NA | - | 8,727,342 |
| 1972-- | 652,204 | - | 652,204 | 3,672,449 | | 1,814,515 | 354,228 | 5,841,192 | 6,493,396 | - | - | 6,493,396 |
| 1973-- | 661,370 | - | 661,370 | 3,438,265 | | 2,058,595 | 308,782 | 5,805,642 | 6,467,012 | - | - | 6,467,012 |
| 1974-- | 564,665 | - | 564,665 | 2,724,554 | | 1,644,681 | - | 4,369,235 | 4,933,900 | - | - | 4,933,900 |
| 1975-- | 516,329 | - | 516,329 | 2,227,771 | | 2,374,550 | 4,766 | 4,607,087 | 5,123,416 | - | - | 5,123,416 |
| 1976-- | 515,550 | - | 515,550 | 2,749,914 | | 2,121,906 | 7,500 | 4,879,320 | 5,394,870 | - | - | 5,394,870 |
| 1977-- | 567,226 | - | 567,226 | 2,771,140 | | 1,924,618 | 7,329 | 4,703,087 | 5,270,313 | - | - | 5,270,313 |

NA Not available.
1/ Raw coal is not produced at the work locations of surface at underground, shops and yards, and mechanical cleaning plants.

TABLE 11B. - Production in short tons, by general work location, at bituminous coal mines in the United States, 1931-77 1/

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | Surface | | | | | | | | | | |
| 1931-- | 363,253,627 | - | 363,253,627 | 18,851,699 | NA | NA | NA | 18,851,699 | 382,105,326 | NA | NA | 382,105,326 |
| 1932-- | 290,067,712 | - | 290,067,712 | 19,642,160 | NA | NA | NA | 19,642,160 | 309,709,872 | NA | NA | 309,709,872 |
| 1933-- | 315,393,626 | - | 315,393,626 | 18,236,907 | NA | NA | NA | 18,236,907 | 333,630,533 | NA | NA | 333,630,533 |
| 1934-- | 338,575,555 | - | 338,575,555 | 20,792,467 | NA | NA | NA | 20,792,467 | 359,368,022 | NA | NA | 359,368,022 |
| 1935-- | 348,721,830 | - | 348,721,830 | 23,647,292 | NA | NA | NA | 23,647,292 | 372,369,122 | NA | NA | 372,369,122 |
| 1936-- | 409,250,811 | - | 409,250,811 | 27,217,522 | NA | NA | - | 27,217,522 | 436,468,333 | NA | NA | 436,468,333 |
| 1937-- | 415,425,475 | - | 415,425,475 | 31,622,011 | NA | NA | - | 31,622,011 | 447,047,486 | NA | NA | 447,047,486 |
| 1938-- | 319,242,392 | - | 319,242,392 | 30,305,134 | NA | NA | - | 30,305,134 | 349,547,526 | NA | NA | 349,547,526 |
| 1939-- | 359,370,734 | - | 359,370,734 | 37,260,204 | NA | NA | - | 37,260,204 | 396,630,938 | NA | NA | 396,630,938 |
| 1940-- | 418,960,315 | - | 418,960,315 | 42,358,314 | NA | NA | - | 42,358,314 | 461,318,629 | NA | NA | 461,318,629 |
| 1941-- | 460,291,510 | - | 460,291,510 | 55,477,738 | NA | NA | - | 55,477,738 | 515,769,248 | NA | NA | 515,769,248 |
| 1942-- | 516,222,364 | - | 516,222,364 | 65,482,476 | NA | NA | - | 65,482,476 | 581,704,840 | NA | NA | 581,704,840 |
| 1943-- | 513,650,838 | - | 513,650,838 | 79,820,525 | NA | - | - | 79,820,525 | 593,471,363 | NA | NA | 593,471,363 |
| 1944-- | 519,915,132 | - | 519,915,132 | 101,443,229 | NA | - | - | 101,443,229 | 621,358,361 | NA | NA | 621,358,361 |
| 1945-- | 467,547,492 | - | 467,547,492 | 108,977,212 | NA | - | - | 108,977,212 | 576,524,704 | NA | NA | 576,524,704 |
| 1946-- | 421,665,932 | - | 421,665,932 | 111,854,137 | NA | - | - | 111,854,137 | 533,520,069 | NA | NA | 533,520,069 |
| 1947-- | 494,140,881 | - | 494,140,881 | 133,893,071 | NA | - | - | 133,893,071 | 628,033,952 | NA | NA | 628,033,952 |
| 1948-- | 457,373,021 | - | 457,373,021 | 135,550,227 | NA | - | - | 135,550,227 | 592,923,248 | NA | NA | 592,923,248 |
| 1949-- | 330,191,876 | - | 330,191,876 | 105,526,739 | NA | - | - | 105,526,739 | 435,718,615 | NA | NA | 435,718,615 |
| 1950-- | 394,787,423 | - | 394,787,423 | 123,091,222 | NA | - | - | 123,091,222 | 517,878,645 | NA | NA | 517,878,645 |
| 1951-- | 417,679,674 | - | 417,679,674 | 115,452,110 | NA | - | - | 115,452,110 | 533,131,784 | NA | NA | 533,131,784 |
| 1952-- | 358,863,901 | - | 358,863,901 | 110,508,718 | NA | - | - | 110,508,718 | 469,372,619 | NA | NA | 469,372,619 |
| 1953-- | 349,294,001 | - | 349,294,001 | 106,591,460 | NA | - | - | 106,591,460 | 455,885,461 | NA | NA | 455,885,461 |
| 1954-- | 290,521,320 | - | 290,521,320 | 101,431,177 | NA | - | - | 101,431,177 | 391,952,497 | NA | NA | 391,952,497 |
| 1955-- | 343,771,769 | - | 343,771,769 | 115,055,189 | 3,692,423 | - | - | 118,747,612 | 462,519,381 | NA | NA | 462,519,381 |
| 1956-- | 361,840,104 | - | 361,840,104 | 126,567,183 | 7,823,275 | - | - | 134,390,458 | 496,230,562 | NA | NA | 496,230,562 |
| 1957-- | 357,887,780 | - | 357,887,780 | 123,269,777 | 8,017,743 | - | - | 131,287,520 | 489,175,300 | NA | NA | 489,175,300 |
| 1958-- | 286,901,618 | - | 286,901,618 | 116,790,126 | 7,244,021 | - | - | 124,034,147 | 410,935,765 | NA | NA | 410,935,765 |
| 1959-- | 283,983,407 | - | 283,983,407 | 120,867,321 | 7,227,767 | - | - | 128,095,088 | 412,078,495 | NA | NA | 412,078,495 |
| 1960-- | 285,282,311 | - | 285,282,311 | 122,909,117 | 7,906,777 | - | - | 130,815,894 | 416,098,205 | NA | NA | 416,098,205 |
| 1961-- | 272,743,138 | - | 272,743,138 | 122,503,030 | 7,975,984 | - | - | 130,479,014 | 403,222,152 | NA | NA | 403,222,152 |
| 1962-- | 281,255,841 | - | 281,255,841 | 130,813,108 | 10,769,478 | - | - | 141,582,586 | 422,838,427 | NA | NA | 422,838,427 |
| 1963-- | 301,929,903 | - | 301,929,903 | 145,933,482 | 12,422,052 | - | - | 158,355,534 | 460,285,437 | NA | NA | 460,285,437 |
| 1964-- | 322,272,222 | - | 322,272,222 | 152,787,978 | 13,025,732 | - | - | 165,813,710 | 488,085,932 | NA | NA | 488,085,932 |
| 1965-- | 332,670,834 | - | 332,670,834 | 166,127,499 | 14,285,371 | - | - | 180,412,870 | 513,083,704 | NA | NA | 513,083,704 |
| 1966-- | 338,246,160 | - | 338,246,160 | 179,241,320 | 15,071,139 | - | - | 194,312,459 | 532,558,619 | NA | - | 532,558,619 |
| 1967-- | 347,117,111 | - | 347,117,111 | 185,526,866 | 15,858,604 | - | - | 201,385,470 | 548,502,581 | NA | - | 548,502,581 |
| 1968-- | 342,157,279 | - | 342,157,279 | 184,680,161 | 15,011,311 | - | - | 199,691,472 | 541,848,751 | NA | - | 541,848,751 |
| 1969-- | 345,603,653 | - | 345,603,653 | 197,397,279 | 15,930,018 | - | - | 213,327,297 | 558,930,950 | NA | - | 558,930,950 |
| 1970-- | 337,875,399 | - | 337,875,399 | 243,457,055 | 18,585,471 | - | - | 262,042,526 | 599,917,925 | NA | - | 599,917,925 |
| 1971-- | 276,724,868 | - | 276,724,868 | 259,945,622 | 17,322,391 | - | - | 277,268,013 | 553,992,881 | NA | - | 553,992,881 |
| 1972-- | 287,062,033 | - | 287,062,033 | 232,158,413 | 8,872,231 | - | - | 241,030,644 | 528,092,677 | - | - | 528,092,677 |
| 1973-- | 285,211,660 | - | 285,211,660 | 257,368,953 | 8,884,179 | - | 17,640 | 266,270,772 | 551,482,432 | - | - | 551,482,432 |
| 1974-- | 263,398,189 | - | 263,398,189 | 289,847,869 | 7,570,911 | - | 22,794 | 297,441,574 | 560,839,763 | - | - | 560,839,763 |
| 1975-- | 278,132,816 | - | 278,132,816 | 322,216,172 | 4,610,911 | 1,003,619 | 43,389 | 327,874,091 | 606,006,907 | - | - | 606,006,907 |
| 1976-- | 280,515,938 | - | 280,515,938 | 355,719,544 | 4,616,597 | 839,967 | - | 361,176,108 | 641,692,046 | - | - | 641,692,046 |
| 1977-- | 256,894,631 | - | 256,894,631 | 403,591,781 | 4,212,494 | 714,592 | - | 408,518,867 | 665,413,498 | - | - | 665,413,498 |

NA Not available.

1/ Raw coal is not produced at the work locations of surface at underground, shops and yards, and mechanical cleaning plants.

TABLE 12. - Count of operations, by general work location, at all coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | 1/ Surface | | | | | | | | | | |
| 1931-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5,652 |
| 1932-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5,473 |
| 1933-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5,629 |
| 1934-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,290 |
| 1935-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,332 |
| 1936-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,572 |
| 1937-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,537 |
| 1938-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,531 |
| 1939-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,274 |
| 1940-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,192 |
| 1941-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,401 |
| 1942-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,940 |
| 1943-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,490 |
| 1944-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,021 |
| 1945-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,992 |
| 1946-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,607 |
| 1947-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9,852 |
| 1948-- | 8,044 | - | 8,044 | 1,951 | NA | 72 | 42 | 2,065 | 10,109 | NA | NA | 10,109 |
| 1949-- | 7,322 | - | 7,322 | 1,915 | NA | 61 | 33 | 2,009 | 9,331 | NA | NA | 9,331 |
| 1950-- | 7,269 | - | 7,269 | 2,060 | NA | 32 | 11 | 2,103 | 9,372 | NA | NA | 9,372 |
| 1951-- | 8,168 | - | 8,168 | 2,060 | NA | 30 | 15 | 2,105 | 10,273 | NA | NA | 10,273 |
| 1952-- | 7,549 | - | 7,549 | 1,973 | NA | 27 | 15 | 2,015 | 9,564 | NA | NA | 9,564 |
| 1953-- | 7,126 | - | 7,126 | 1,986 | NA | 36 | 11 | 2,033 | 9,159 | NA | NA | 9,159 |
| 1954-- | 6,559 | - | 6,559 | 1,792 | NA | 28 | 6 | 1,826 | 8,385 | NA | NA | 8,385 |
| 1955-- | 8,181 | - | 8,181 | 1,848 | 120 | 25 | 8 | 2,001 | 10,182 | NA | NA | 10,182 |
| 1956-- | 8,547 | - | 8,547 | 1,897 | 213 | 74 | 23 | 2,207 | 10,754 | NA | NA | 10,754 |
| 1957-- | 8,337 | - | 8,337 | 1,943 | 274 | 87 | 18 | 2,322 | 10,659 | NA | NA | 10,659 |
| 1958-- | 8,561 | - | 8,561 | 1,968 | 299 | 131 | 21 | 2,419 | 10,980 | NA | NA | 10,980 |
| 1959-- | 8,214 | - | 8,214 | 1,851 | 308 | 132 | 25 | 2,316 | 10,530 | NA | NA | 10,530 |
| 1960-- | 8,447 | - | 8,447 | 1,782 | 347 | 110 | 26 | 2,265 | 10,712 | NA | NA | 10,712 |
| 1961-- | 7,854 | - | 7,854 | 1,744 | 327 | 114 | 21 | 2,206 | 10,060 | NA | NA | 10,060 |
| 1962-- | 7,848 | - | 7,848 | 1,725 | 366 | 111 | 20 | 2,222 | 10,070 | NA | NA | 10,070 |
| 1963-- | 7,916 | - | 7,916 | 1,715 | 379 | 112 | 15 | 2,221 | 10,137 | NA | NA | 10,137 |
| 1964-- | 7,135 | - | 7,135 | 1,728 | 408 | 110 | 12 | 2,258 | 9,393 | NA | NA | 9,393 |
| 1965-- | 6,866 | - | 6,866 | 1,770 | 397 | 104 | 14 | 2,285 | 9,151 | NA | NA | 9,151 |
| 1966-- | 5,675 | - | 5,675 | 1,684 | 445 | 104 | 10 | 2,243 | 7,918 | NA | 603 | 8,521 |
| 1967-- | 4,734 | - | 4,734 | 1,591 | 440 | 114 | 6 | 2,151 | 6,885 | NA | 569 | 7,454 |
| 1968-- | 4,100 | - | 4,100 | 1,642 | 444 | 129 | 7 | 2,222 | 6,322 | NA | 565 | 6,887 |
| 1969-- | 3,647 | - | 3,647 | 1,715 | 495 | 93 | 5 | 2,308 | 5,955 | NA | 550 | 6,505 |
| 1970-- | 3,256 | - | 3,256 | 2,292 | 650 | 113 | 5 | 3,060 | 6,316 | NA | 544 | 6,860 |
| 1971-- | 2,435 | - | 2,435 | 2,456 | 588 | 81 | 5 | 3,130 | 5,565 | NA | 567 | 6,132 |
| 1972-- | 1,606 | - | 1,606 | 1,367 | 317 | 44 | 2 | 1,730 | 3,336 | 37 | 872 | 4,245 |
| 1973-- | 1,394 | - | 1,394 | 1,184 | 238 | 36 | 2 | 1,460 | 2,854 | 71 | 736 | 3,661 |
| 1974-- | 1,448 | - | 1,448 | 1,482 | 246 | 42 | 3 | 1,773 | 3,221 | 94 | 767 | 4,082 |
| 1975-- | 1,702 | - | 1,702 | 2,074 | 228 | 60 | 5 | 2,367 | 4,069 | 100 | 836 | 5,005 |
| 1976-- | 1,992 | - | 1,992 | 2,444 | 249 | 72 | 2 | 2,767 | 4,759 | 116 | 976 | 5,851 |
| 1977-- | 2,144 | - | 2,144 | 2,847 | 265 | 62 | 2 | 3,176 | 5,320 | 142 | 1,155 | 6,617 |

1/ Always associated with underground for count.
NA Not available.

TABLE 12A. - Count of operations, by general work location, at Pennsylvania anthracite mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | 1/ Surface | | | | | | | | | | |
| 1931-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1932-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1933-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1934-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1935-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1936-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1937-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1938-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1939-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1940-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1941-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1942-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1943-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | NA |
| 1944-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | 586 |
| 1945-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | 634 |
| 1946-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | 665 |
| 1947-- | NA | NA | NA | NA | | NA | NA | NA | NA | NA | NA | 747 |
| 1948-- | 411 | - | 411 | 165 | | 72 | 42 | 279 | 690 | NA | NA | 690 |
| 1949-- | 354 | - | 354 | 144 | | 61 | 33 | 238 | 592 | NA | NA | 592 |
| 1950-- | 346 | - | 346 | 166 | | 32 | 11 | 209 | 555 | NA | NA | 555 |
| 1951-- | 376 | - | 376 | 173 | | 30 | 15 | 218 | 594 | NA | NA | 594 |
| 1952-- | 371 | - | 371 | 157 | | 27 | 15 | 199 | 570 | NA | NA | 570 |
| 1953-- | 343 | - | 343 | 159 | | 36 | 11 | 206 | 549 | NA | NA | 549 |
| 1954-- | 289 | - | 289 | 128 | | 28 | 6 | 162 | 451 | NA | NA | 451 |
| 1955-- | 1,336 | - | 1,336 | 137 | | 25 | 8 | 170 | 1,506 | NA | NA | 1,506 |
| 1956-- | 1,254 | - | 1,254 | 157 | | 74 | 23 | 254 | 1,508 | NA | NA | 1,508 |
| 1957-- | 1,259 | - | 1,259 | 178 | | 87 | 18 | 283 | 1,542 | NA | NA | 1,542 |
| 1958-- | 1,180 | - | 1,180 | 189 | | 131 | 21 | 341 | 1,521 | NA | NA | 1,521 |
| 1959-- | 1,113 | - | 1,113 | 175 | | 132 | 25 | 332 | 1,445 | NA | NA | 1,445 |
| 1960-- | 1,055 | - | 1,055 | 174 | | 110 | 26 | 310 | 1,365 | NA | NA | 1,365 |
| 1961-- | 1,058 | - | 1,058 | 176 | | 114 | 21 | 311 | 1,369 | NA | NA | 1,369 |
| 1962-- | 949 | - | 949 | 185 | | 111 | 20 | 316 | 1,265 | NA | NA | 1,265 |
| 1963-- | 834 | - | 834 | 200 | | 112 | 15 | 327 | 1,161 | NA | NA | 1,161 |
| 1964-- | 725 | - | 725 | 205 | | 110 | 12 | 327 | 1,052 | NA | NA | 1,052 |
| 1965-- | 637 | - | 637 | 188 | | 104 | 14 | 306 | 943 | NA | NA | 943 |
| 1966-- | 432 | - | 432 | 156 | | 104 | 10 | 270 | 702 | NA | 145 | 847 |
| 1967-- | 285 | - | 285 | 152 | | 114 | 6 | 272 | 557 | NA | 135 | 692 |
| 1968-- | 250 | - | 250 | 152 | | 129 | 7 | 288 | 538 | NA | 126 | 664 |
| 1969-- | 197 | - | 197 | 124 | | 93 | 5 | 222 | 419 | NA | 111 | 530 |
| 1970-- | 203 | - | 203 | 141 | | 113 | 5 | 259 | 462 | NA | 102 | 564 |
| 1971-- | 154 | - | 154 | 178 | | 81 | 5 | 264 | 418 | NA | 76 | 494 |
| 1972-- | 72 | - | 72 | 98 | | 43 | 2 | 143 | 215 | 2 | 87 | 304 |
| 1973-- | 52 | - | 52 | 72 | | 36 | 1 | 109 | 161 | 6 | 67 | 234 |
| 1974-- | 46 | - | 46 | 70 | | 42 | 1 | 113 | 159 | 8 | 70 | 237 |
| 1975-- | 69 | - | 69 | 79 | | 53 | 2 | 134 | 203 | 6 | 64 | 273 |
| 1976-- | 84 | - | 84 | 95 | | 63 | 2 | 160 | 244 | 5 | 76 | 325 |
| 1977-- | 77 | - | 77 | 90 | | 50 | 2 | 142 | 219 | 5 | 83 | 307 |

SURFACE AUGER MINING NOT REPORTED

1/ Always associated with underground for count.
NA Not available.

TABLE 12B. - Count of operations, by general work location, at bituminous coal mines in the United States, 1931-77

| Year | Underground mines | | Total underground mines | Strip | Auger | Culm banks | Dredges | Total surface mining | Total mining | Independent shops and yards | Mechanical cleaning plants | Grand total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Underground | 1/ Surface | | | | | | | | | | |
| 1931-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5,652 |
| 1932-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5,473 |
| 1933-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5,629 |
| 1934-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,290 |
| 1935-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,332 |
| 1936-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,572 |
| 1937-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,537 |
| 1938-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,531 |
| 1939-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,274 |
| 1940-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,192 |
| 1941-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 7,401 |
| 1942-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,940 |
| 1943-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,490 |
| 1944-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,435 |
| 1945-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,358 |
| 1946-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6,942 |
| 1947-- | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 9,105 |
| 1948-- | 7,633 | - | 7,633 | 1,786 | NA | - | - | 1,786 | 9,419 | NA | NA | 9,419 |
| 1949-- | 6,968 | - | 6,968 | 1,771 | NA | - | - | 1,771 | 8,739 | NA | NA | 8,739 |
| 1950-- | 6,923 | - | 6,923 | 1,894 | NA | - | - | 1,894 | 8,817 | NA | NA | 8,817 |
| 1951-- | 7,792 | - | 7,792 | 1,887 | NA | - | - | 1,887 | 9,679 | NA | NA | 9,679 |
| 1952-- | 7,178 | - | 7,178 | 1,816 | NA | - | - | 1,816 | 8,994 | NA | NA | 8,994 |
| 1953-- | 6,783 | - | 6,783 | 1,827 | NA | - | - | 1,827 | 8,610 | NA | NA | 8,610 |
| 1954-- | 6,270 | - | 6,270 | 1,664 | NA | - | - | 1,664 | 7,934 | NA | NA | 7,934 |
| 1955-- | 6,845 | - | 6,845 | 1,711 | 120 | - | - | 1,831 | 8,676 | NA | NA | 8,676 |
| 1956-- | 7,293 | - | 7,293 | 1,740 | 213 | - | - | 1,953 | 9,246 | NA | NA | 9,246 |
| 1957-- | 7,078 | - | 7,078 | 1,765 | 274 | - | - | 2,039 | 9,117 | NA | NA | 9,117 |
| 1958-- | 7,381 | - | 7,381 | 1,779 | 299 | - | - | 2,078 | 9,459 | NA | NA | 9,459 |
| 1959-- | 7,101 | - | 7,101 | 1,676 | 308 | - | - | 1,984 | 9,085 | NA | NA | 9,085 |
| 1960-- | 7,392 | - | 7,392 | 1,608 | 347 | - | - | 1,955 | 9,347 | NA | NA | 9,347 |
| 1961-- | 6,796 | - | 6,796 | 1,568 | 327 | - | - | 1,895 | 8,691 | NA | NA | 8,691 |
| 1962-- | 6,899 | - | 6,899 | 1,540 | 366 | - | - | 1,906 | 8,805 | NA | NA | 8,805 |
| 1963-- | 7,082 | - | 7,082 | 1,515 | 379 | - | - | 1,894 | 8,976 | NA | NA | 8,976 |
| 1964-- | 6,410 | - | 6,410 | 1,523 | 408 | - | - | 1,931 | 8,341 | NA | NA | 8,341 |
| 1965-- | 6,229 | - | 6,229 | 1,582 | 397 | - | - | 1,979 | 8,208 | NA | NA | 8,208 |
| 1966-- | 5,243 | - | 5,243 | 1,528 | 445 | - | - | 1,973 | 7,216 | NA | 458 | 7,674 |
| 1967-- | 4,449 | - | 4,449 | 1,439 | 440 | - | - | 1,879 | 6,328 | NA | 434 | 6,762 |
| 1968-- | 3,850 | - | 3,850 | 1,490 | 444 | - | - | 1,934 | 5,784 | NA | 439 | 6,223 |
| 1969-- | 3,450 | - | 3,450 | 1,591 | 495 | - | - | 2,086 | 5,536 | NA | 439 | 5,975 |
| 1970-- | 3,053 | - | 3,053 | 2,151 | 650 | - | - | 2,801 | 5,854 | NA | 442 | 6,296 |
| 1971-- | 2,281 | - | 2,281 | 2,278 | 588 | - | - | 2,866 | 5,147 | NA | 491 | 5,638 |
| 1972-- | 1,534 | - | 1,534 | 1,269 | 317 | 1 | - | 1,587 | 3,121 | 35 | 785 | 3,941 |
| 1973-- | 1,342 | - | 1,342 | 1,112 | 238 | - | 1 | 1,351 | 2,693 | 65 | 669 | 3,427 |
| 1974-- | 1,402 | - | 1,402 | 1,412 | 246 | - | 2 | 1,660 | 3,062 | 86 | 697 | 3,845 |
| 1975-- | 1,633 | - | 1,633 | 1,995 | 228 | 7 | 3 | 2,233 | 3,866 | 94 | 772 | 4,732 |
| 1976-- | 1,908 | - | 1,908 | 2,349 | 249 | 9 | - | 2,607 | 4,515 | 111 | 900 | 5,526 |
| 1977-- | 2,067 | - | 2,067 | 2,757 | 265 | 12 | - | 3,034 | 5,101 | 137 | 1,072 | 6,310 |

1/ Always associated with underground for count.
NA Not available.

Figure 2. - Injury-frequency rates and worktime data, totals of all metal/nonmetal operations in the United States, 1950-77

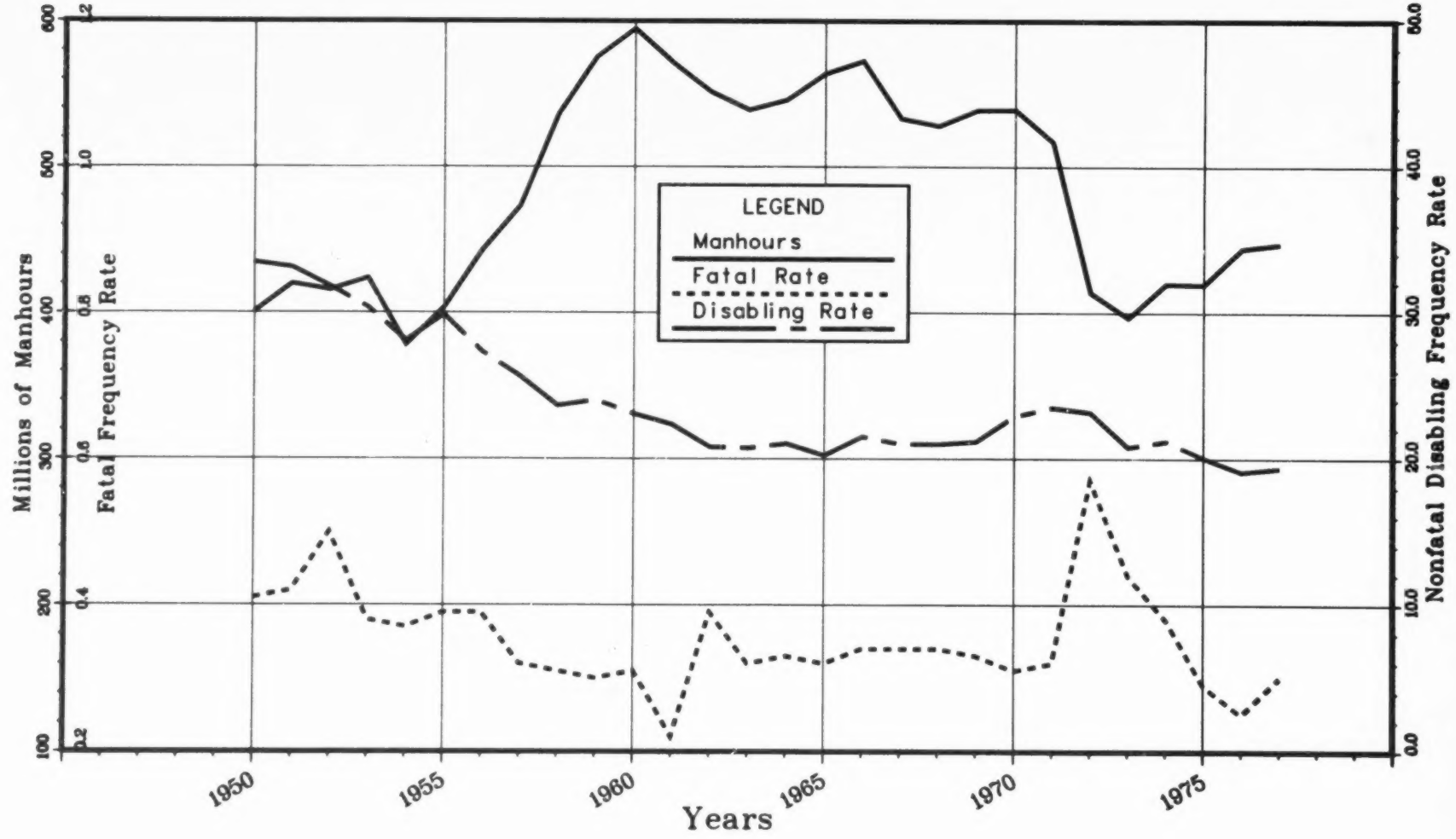

TABLE 11. - Injury experience and working data at metal, nonmetal, stone, and sand and gravel mines and mills in the United States, 1931-77

| Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average days worked daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1,[illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 308,863 |
| [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | 293,914 |
| [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | NA | NA | [illegible] | [illegible]

TABLE 14. - Injury experience and worktime data at metal, nonmetal, stone, and sand and gravel mines in the United States, 1931-77 1/

| Year | Injuries | | | | | Frequency rates per million manhours | | | | | Severity rates per million manhours | | | Average days per working daily | Manhours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1931 | 2[illegible] | 12,[illegible] | 12,[illegible] | NA | 12,[illegible] | [illegible]98 | 56.95 | 57.93 | NA | 57.93 | 5,872 | NA | NA | 114,161 | 212,[illegible] |
| 1932 | 1[illegible] | 7,[illegible] | 7,292 | NA | 7,292 | .96 | 54.87 | 55.83 | NA | 55.83 | 5,789 | NA | NA | 114,[illegible] | 130,[illegible] |
| 1933 | 1[illegible] | 8,19[illegible] | 8,327 | NA | 8,327 | 1.05 | 62.82 | 63.88 | NA | 63.88 | 6,336 | NA | NA | 84,[illegible] | 130,[illegible] |
| 1934 | 1[illegible] | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | 1.05 | 68.19 | 69.24 | NA | 69.24 | 6,289 | NA | NA | [illegible] | 153,594 |
| 1935 | 1[illegible] | 12,[illegible] | 13,117 | NA | 13,117 | .97 | 62.84 | 63.81 | NA | 63.81 | 5,808 | NA | NA | 124,[illegible] | 205,[illegible] |
| 1936 | 2[illegible] | 15,[illegible] | 15,436 | NA | 15,436 | .96 | 69.37 | 70.34 | NA | 70.34 | 5,768 | NA | NA | 130,[illegible] | 219,115 |
| 1937 | 2[illegible] | 21,[illegible] | 22,251 | NA | 22,251 | .88 | 72.[illegible] | 73.68 | NA | 73.68 | 5,271 | NA | NA | 133,[illegible] | 302,828 |
| 1938 | 2[illegible] | 15,[illegible] | 16,[illegible] | NA | 16,[illegible] | .90 | 65.05 | 65.85 | NA | 65.85 | 5,393 | NA | NA | 136,[illegible] | 246,128 |
| 1939 | 2[illegible] | 17,[illegible] | 17,284 | NA | 17,284 | .78 | 65.[illegible] | 65.82 | NA | 65.82 | 4,[illegible] | NA | NA | 136,[illegible] | 262,[illegible] |
| 1940 | 2[illegible] | 17,[illegible] | 18,185 | NA | 18,185 | .90 | 62.56 | 63.52 | NA | 63.52 | 5,764 | NA | NA | 134,[illegible] | 286,265 |
| 1941 | 2[illegible] | 19,[illegible] | 21,[illegible] | NA | 21,[illegible] | .89 | 62.[illegible] | 62.89 | NA | 62.89 | 5,324 | NA | NA | 141,[illegible] | 12[illegible],[illegible] |
| 1942 | 1[illegible] | 17,[illegible] | 17,825 | NA | 17,825 | 1.[illegible] | 54.99 | 55.99 | NA | 55.99 | [illegible],[illegible] | NA | NA | 136,[illegible] | 318,338 |
| 1943 | 2[illegible] | 15,[illegible] | 16,[illegible] | NA | 16,[illegible] | .92 | 54.40 | 55.32 | NA | 55.32 | 5,563 | NA | NA | 127,[illegible] | 290,[illegible] |
| 1944 | 1[illegible] | 12,[illegible] | 12,62[illegible] | NA | 12,62[illegible] | .83 | 52.95 | 53.78 | NA | 53.78 | [illegible],[illegible] | NA | NA | [illegible],[illegible] | 234,[illegible] |
| 1945 | 1[illegible] | 1,[illegible] | 1,292 | NA | 1,292 | .69 | 48.45 | 49.15 | NA | 49.15 | [illegible],[illegible] | NA | NA | [illegible],[illegible] | 26[illegible],[illegible] |
| 1946 | 1[illegible] | 11,[illegible] | 11,[illegible] | NA | 11,[illegible] | .68 | 52.23 | 52.91 | NA | 52.91 | [illegible],[illegible] | NA | NA | 147,[illegible] | 22[illegible],[illegible] |
| 1947 | 1[illegible] | 12,[illegible] | 12,725 | NA | 12,725 | .70 | 49.58 | 50.28 | NA | 50.28 | [illegible],[illegible] | NA | NA | [illegible],[illegible] | 253,[illegible] |
| 1948 | 1[illegible] | 11,[illegible] | 11,[illegible] | NA | 11,[illegible] | .63 | 44.[illegible] | 45.53 | NA | 45.53 | 3,[illegible] | NA | NA | 116,[illegible] | 25[illegible],[illegible] |
| 1949 | 1[illegible] | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .52 | 44.[illegible] | 45.28 | NA | 45.28 | 3,112 | NA | NA | 119,[illegible] | 242,[illegible] |
| 1950 | 1[illegible] | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .53 | 41.47 | 42.[illegible] | NA | 42.[illegible] | 3,[illegible] | NA | NA | 118,[illegible] | 252,[illegible] |
| 1951 | 1[illegible] | 11,[illegible] | 11,177 | NA | 11,177 | .54 | 41.46 | 42.[illegible] | NA | 42.[illegible] | 3,27[illegible] | NA | NA | 121,[illegible] | 266,[illegible] |
| 1952 | 1[illegible] | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .48 | 39.75 | 40.[illegible] | NA | 40.[illegible] | [illegible],[illegible] | NA | NA | 123,712 | 263,[illegible] |
| 1953 | 1[illegible] | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .52 | 38.72 | 39.24 | NA | 39.24 | 3,120 | NA | NA | 123,283 | 265,422 |
| 1954 | 1[illegible] | 8,[illegible] | 8,[illegible] | NA | 8,[illegible] | .52 | 36.87 | 37.39 | NA | 37.39 | 3,134 | NA | NA | 114,[illegible] | 229,744 |
| 1955 | 1[illegible] | 9,[illegible] | 9,661 | NA | 9,661 | .56 | 40.42 | 40.98 | NA | 40.98 | 3,385 | NA | NA | 113,252 | 235,741 |
| 1956 | 1[illegible] | 8,[illegible] | 9,122 | NA | 9,122 | .57 | 36.16 | 36.73 | NA | 36.73 | 3,[illegible] | 1,[illegible] | 4,828 | 119,[illegible] | 248,351 |
| 1957 | 1[illegible] | 8,[illegible] | 8,[illegible] | NA | 8,[illegible] | .44 | 33.85 | 34.29 | NA | 34.29 | 2,63[illegible] | 1,278 | 3,[illegible] | 121,[illegible] | 253,194 |
| 1958 | 1[illegible] | 8,[illegible] | 8,863 | NA | 8,863 | .44 | 28.46 | 28.91 | NA | 28.91 | 2,661 | 1,111 | 3,[illegible] | 1[illegible],[illegible] | [illegible],[illegible] |
| 1959 | 1[illegible] | 9,[illegible] | 9,135 | NA | 9,135 | .42 | 27.95 | 28.37 | NA | 28.37 | 2,515 | 1,[illegible] | 3,595 | 175,252 | 322,[illegible] |
| 1960 | 1[illegible] | 9,[illegible] | 9,349 | NA | 9,349 | .46 | 28.37 | 28.83 | NA | 28.83 | 2,736 | 1,[illegible] | 3,775 | 169,[illegible] | 324,278 |
| 1961 | 1[illegible] | 8,[illegible] | 8,[illegible] | NA | 8,[illegible] | .34 | 27.35 | 27.69 | NA | 27.69 | 2,[illegible] | 1,245 | 3,269 | 163,[illegible] | 314,215 |
| 1962 | 1[illegible] | 7,[illegible] | 8,083 | NA | 8,083 | .34 | 26.[illegible] | 26.62 | NA | 26.62 | 3,24[illegible] | 1,[illegible] | 4,[illegible] | 159,[illegible] | 303,688 |
| 1963 | 1[illegible] | 7,[illegible] | 7,611 | NA | 7,611 | .48 | 25.20 | 25.67 | NA | 25.67 | 2,854 | 1,286 | 4,140 | 153,[illegible] | 296,[illegible] |
| 1964 | 1[illegible] | 7,[illegible] | 7,[illegible] | NA | 7,[illegible] | .47 | 25.[illegible] | 25.47 | NA | 25.47 | 2,8[illegible] | 1,[illegible] | 4,151 | 16[illegible],[illegible] | 312,88[illegible] |
| 1965 | 1[illegible] | 7,[illegible] | 7,[illegible] | NA | 7,[illegible] | .44 | 23.57 | 24.[illegible] | NA | 24.[illegible] | 2,651 | 1,[illegible] | 3,[illegible] | 162,245 | 328,182 |
| 1966 | 1[illegible] | 8,[illegible] | 8,482 | NA | 8,482 | .47 | 25.11 | 25.59 | NA | 25.59 | 2,842 | 1,352 | 4,194 | 160,581 | 331,502 |
| 1967 | 1[illegible] | 7,[illegible] | 7,[illegible] | NA | 7,[illegible] | .46 | 24.13 | 24.59 | NA | 24.59 | 2,764 | 1,[illegible] | 3,923 | 154,845 | 319,894 |
| 1968 | 1[illegible] | 7,[illegible] | 7,[illegible] | NA | 7,[illegible] | .51 | 24.30 | 24.81 | NA | 24.81 | 3,[illegible] | 1,[illegible] | 4,251 | 148,[illegible] | 301,324 |
| 1969 | 1[illegible] | 7,[illegible] | 7,[illegible] | NA | 7,[illegible] | .49 | 24.18 | 24.67 | NA | 24.67 | 2,93[illegible] | 1,[illegible] | 4,[illegible] | 148,[illegible] | 317,[illegible] |
| 1970 | 1[illegible] | 8,[illegible] | 8,[illegible] | NA | 8,[illegible] | .43 | 26.39 | 26.82 | NA | 26.82 | 2,590 | 1,[illegible] | 3,[illegible] | 147,[illegible] | 308,[illegible] |
| 1971 | 1[illegible] | 7,[illegible] | 7,[illegible] | NA | 7,[illegible] | .42 | 26.42 | 26.84 | NA | 26.84 | 2,517 | 1,[illegible] | 3,612 | 145,524 | 297,[illegible] |
| 1972 | 1[illegible] | 9,[illegible] | 9,[illegible] | NA | 9,[illegible] | .87 | 25.45 | 26.32 | NA | 26.32 | 5,[illegible] | 1,[illegible] | 6,[illegible] | [illegible],[illegible] | 229,[illegible] |
| 1973 | 1[illegible] | 9,[illegible] | 9,[illegible] | 2,[illegible] | 11,[illegible] | .58 | 26.31 | 26.[illegible] | 14.25 | 40.[illegible] | 3,[illegible] | 1,[illegible] | 4,[illegible] | 141,[illegible] | 246,[illegible] |
| 1974 | 1[illegible] | 7,[illegible] | [illegible],[illegible] | 4,[illegible] | 11,[illegible] | .51 | 26.[illegible] | 27.[illegible] | 16.[illegible] | 44.[illegible] | [illegible],[illegible] | 1,[illegible] | 4,[illegible] | 159,[illegible] | 262,[illegible] |
| 1975 | 1[illegible] | 6,[illegible] | [illegible],[illegible] | 3,[illegible] | 10,[illegible] | .39 | 24.[illegible] | 24.[illegible] | 14.[illegible] | 39.[illegible] | 2,[illegible] | 1,[illegible] | 3,[illegible] | 1[illegible],[illegible] | 26[illegible],[illegible] |
| 1976 | [illegible] | 5,[illegible] | 5,781 | 2,[illegible] | 8,[illegible] | .35 | 22.[illegible] | 22.[illegible] | 10.[illegible] | 33.[illegible] | 2,[illegible] | 1,[illegible] | 3,[illegible] | 148,414 | 254,[illegible] |
| 1977 | 1[illegible] | 5,[illegible] | 5,587 | 4,[illegible] | 9,[illegible] | .40 | 21.46 | 21.86 | 15.[illegible] | 37.[illegible] | 2,[illegible] | 1,[illegible] | 3,[illegible] | 149,935 | 255,[illegible] |

NA Not available
1/ Sand and gravel first compiled in 1958.

TABLE 15. - Injury experience and worktime data at metal, nonmetal, and stone mills in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1931 | 1[illegible] | 2,[illegible] | 2,[illegible] | NA | 2,681 | .18 | 25.68 | 25.86 | NA | 25.86 | 1,058 | NA | NA | 44,846 | 86,404 |
| 1932 | 68 | 1,694 | 1,694 | NA | 1,694 | .20 | 25.65 | 25.85 | NA | 25.85 | 1,190 | NA | NA | 36,683 | 67,533 |
| 1933 | 72 | 1,698 | 1,698 | NA | 1,698 | .55 | 26.80 | 27.15 | NA | 27.15 | 2,121 | NA | NA | 40,588 | 62,245 |
| 1934 | 72 | 1,622 | 1,622 | NA | 1,622 | .26 | 24.99 | 25.26 | NA | 25.26 | 1,666 | NA | NA | 44,771 | 72,116 |
| 1935 | 91 | 2,[illegible] | 2,[illegible] | NA | 2,[illegible] | .26 | 23.[illegible] | 23.70 | NA | 23.70 | 1,562 | NA | NA | 52,217 | 88,344 |
| 1936 | 96 | 2,[illegible] | 2,[illegible] | NA | 2,[illegible] | .24 | 25.97 | 26.[illegible] | NA | 26.[illegible] | 2,925 | NA | NA | 57,388 | 114,874 |
| 1937 | 93 | 2,[illegible] | 2,381 | NA | 2,381 | .15 | 27.77 | 28.12 | NA | 28.12 | 2,073 | NA | NA | 61,712 | 127,346 |
| 1938 | 71 | 1,[illegible] | 1,778 | NA | 1,778 | .29 | 25.87 | 26.16 | NA | 26.16 | 1,752 | NA | NA | 56,196 | 106,194 |
| 1939 | 78 | 1,[illegible] | 1,722 | NA | 1,722 | .24 | 23.42 | 23.57 | NA | 23.57 | 1,455 | NA | NA | 57,825 | 115,501 |
| 1940 | 92 | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .26 | 24.64 | 24.90 | NA | 24.90 | 1,565 | NA | NA | 60,121 | 122,684 |
| 1941 | 118 | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .27 | 26.64 | 26.91 | NA | 26.91 | 1,613 | NA | NA | 64,984 | 141,394 |
| 1942 | 91 | 1,[illegible] | 1,739 | NA | 1,739 | .27 | 25.16 | 25.[illegible] | NA | 25.43 | 1,632 | NA | NA | 63,915 | 147,048 |
| 1943 | 110 | 3,[illegible] | 3,332 | NA | 3,332 | .33 | 24.93 | 25.28 | NA | 25.28 | 2,094 | NA | NA | 56,335 | 131,815 |
| 1944 | 98 | 3,[illegible] | 3,[illegible] | NA | 3,[illegible] | .33 | 26.54 | 26.86 | NA | 26.86 | 1,962 | NA | NA | 54,668 | 128,467 |
| 1945 | 80 | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .24 | 25.20 | 25.[illegible] | NA | 25.43 | 1,427 | NA | NA | 52,419 | 121,967 |
| 1946 | 78 | 1,[illegible] | 1,[illegible] | NA | 1,[illegible] | .24 | 25.17 | 25.[illegible] | NA | 25.41 | 1,458 | NA | NA | 55,237 | 127,587 |
| 1947 | 98 | 1,[illegible] | 1,471 | NA | 1,471 | .31 | 24.32 | 24.63 | NA | 24.63 | 1,830 | NA | NA | 59,196 | 140,959 |
| 1948 | 90 | 3,[illegible] | 3,042 | NA | 3,042 | .27 | 20.65 | 20.91 | NA | 20.91 | 1,609 | NA | NA | 59,787 | 145,453 |
| 1949 | 70 | 2,816 | 2,842 | NA | 2,842 | .18 | 19.34 | 19.52 | NA | 19.52 | 1,071 | NA | NA | 62,872 | 145,625 |
| 1950 | 76 | 2,[illegible] | 2,[illegible] | NA | 2,[illegible] | .20 | 18.84 | 19.[illegible] | NA | 19.04 | 1,219 | NA | NA | 62,407 | 147,718 |
| 1951 | 74 | 2,[illegible] | 2,[illegible] | NA | 2,[illegible] | .20 | 18.64 | 18.[illegible] | NA | 18.83 | 1,171 | NA | NA | 63,795 | 153,765 |
| 1952 | 63 | 2,[illegible] | 2,[illegible] | NA | 2,[illegible] | .19 | 17.97 | 18.16 | NA | 18.16 | 1,146 | NA | NA | 62,751 | 151,859 |
| 1953 | 63 | 2,[illegible] | 2,[illegible] | NA | 2,[illegible] | .15 | 16.32 | 16.47 | NA | 16.47 | 872 | NA | NA | 65,407 | 158,260 |
| 1954 | 54 | 2,[illegible] | 2,163 | NA | 2,163 | .13 | 14.46 | 14.59 | NA | 14.59 | 769 | NA | NA | 63,116 | 148,247 |
| 1955 | 74 | 2,[illegible] | 2,[illegible] | NA | 2,[illegible] | .14 | 15.03 | 15.18 | NA | 15.18 | 858 | NA | NA | 70,987 | 167,757 |
| 1956 | 72 | .[illegible] | 1,151 | NA | 1,151 | .16 | 16.05 | 16.21 | NA | 16.21 | 957 | 348 | 1,305 | 81,365 | 194,415 |
| 1957 | 61 | .[illegible] | 1,[illegible] | NA | 1,[illegible] | .19 | 16.20 | 16.38 | NA | 16.38 | 1,119 | 448 | 1,567 | 95,174 | 219,818 |
| 1958 | 51 | .[illegible] | 1,[illegible] | NA | 1,[illegible] | .13 | 17.21 | 17.34 | NA | 17.34 | 809 | 328 | 1,138 | 104,400 | 229,796 |
| 1959 | 66 | .[illegible] | 4,851 | NA | 4,851 | .15 | 19.00 | 19.15 | NA | 19.15 | 900 | 432 | 1,332 | 113,308 | 253,357 |
| 1960 | 63 | .[illegible] | 4,555 | NA | 4,555 | .14 | 16.71 | 16.85 | NA | 16.85 | 821 | 345 | 1,167 | 119,370 | 270,319 |
| 1961 | 49 | .[illegible] | 4,[illegible] | NA | 4,[illegible] | .08 | 16.22 | 16.30 | NA | 16.30 | 491 | 340 | 830 | 113,978 | 256,868 |
| 1962 | 52 | .[illegible] | 3,[illegible] | NA | 3,[illegible] | .21 | 14.32 | 14.53 | NA | 14.53 | 1,261 | 736 | 1,997 | 110,131 | 247,489 |
| 1963 | 52 | .[illegible] | 1,[illegible] | NA | 1,[illegible] | .13 | 15.30 | 15.43 | NA | 15.43 | 792 | 742 | 1,534 | 106,304 | 242,476 |
| 1964 | 61 | .[illegible] | 4,[illegible] | NA | 4,[illegible] | .14 | 15.71 | 15.85 | NA | 15.85 | 850 | 723 | 1,573 | 100,633 | 232,896 |
| 1965 | 55 | .[illegible] | 4,[illegible] | NA | 4,[illegible] | .15 | 15.60 | 15.75 | NA | 15.75 | 891 | 836 | 1,728 | 100,827 | 235,570 |
| 1966 | 58 | .[illegible] | 4,[illegible] | NA | 4,[illegible] | .16 | 16.55 | 16.71 | NA | 16.71 | 946 | 1,023 | 1,969 | 101,412 | 240,977 |
| 1967 | 41 | .[illegible] | 3,[illegible] | NA | 3,[illegible] | .18 | 16.90 | 17.08 | NA | 17.08 | 1,074 | 802 | 1,876 | 101,154 | 229,122 |
| 1968 | 29 | .[illegible] | 1,[illegible] | NA | 1,[illegible] | .12 | 16.66 | 16.78 | NA | 16.78 | 714 | 758 | 1,473 | 97,238 | 226,740 |
| 1969 | 29 | .[illegible] | 4,[illegible] | NA | 4,[illegible] | .13 | 17.19 | 17.31 | NA | 17.31 | 751 | 765 | 1,516 | 98,226 | 231,611 |
| 1970 | 32 | .[illegible] | 4,[illegible] | NA | 4,[illegible] | .14 | 18.26 | 18.40 | NA | 18.40 | 831 | 872 | 1,704 | 95,386 | 231,012 |
| 1971 | 40 | .[illegible] | 3,[illegible] | NA | 3,[illegible] | .18 | 19.52 | 19.70 | NA | 19.70 | 1,068 | 915 | 1,983 | 91,535 | 219,061 |
| 1972 | 35 | .[illegible] | 3,[illegible] | NA | 3,[illegible] | .19 | 20.37 | 20.56 | NA | 20.56 | 1,137 | 736 | 1,873 | 75,795 | 184,658 |
| 1973 | 41 | .[illegible] | 1,[illegible] | 1,[illegible] | 4,[illegible] | .21 | 11.73 | 11.94 | 11.71 | 23.65 | 1,241 | 531 | 1,772 | 79,497 | 149,855 |
| 1974 | 24 | .[illegible] | 1,[illegible] | 1,[illegible] | 4,[illegible] | .15 | 12.05 | 12.19 | 11.07 | 23.26 | 880 | 794 | 1,674 | 84,616 | 156,871 |
| 1975 | 21 | .[illegible] | 2,[illegible] | 1,[illegible] | 3,[illegible] | .14 | 13.07 | 13.19 | 11.50 | 24.70 | 777 | 565 | 1,342 | 83,225 | 154,378 |
| 1976 | 24 | .[illegible] | 2,[illegible] | 1,[illegible] | 4,[illegible] | .13 | 14.74 | 14.87 | 9.69 | 24.56 | 760 | 777 | 1,537 | 95,961 | 189,478 |
| 1977 | 9 | .172 | 1,[illegible] | 1,[illegible] | 3,[illegible] | .17 | 16.56 | 16.73 | 10.43 | 27.16 | 1,003 | 943 | 1,946 | 99,091 | 191,515 |

NA Not available.

Figure 3. - Injury-frequency rates and worktime data for all metal operations in the United States, 1950-77

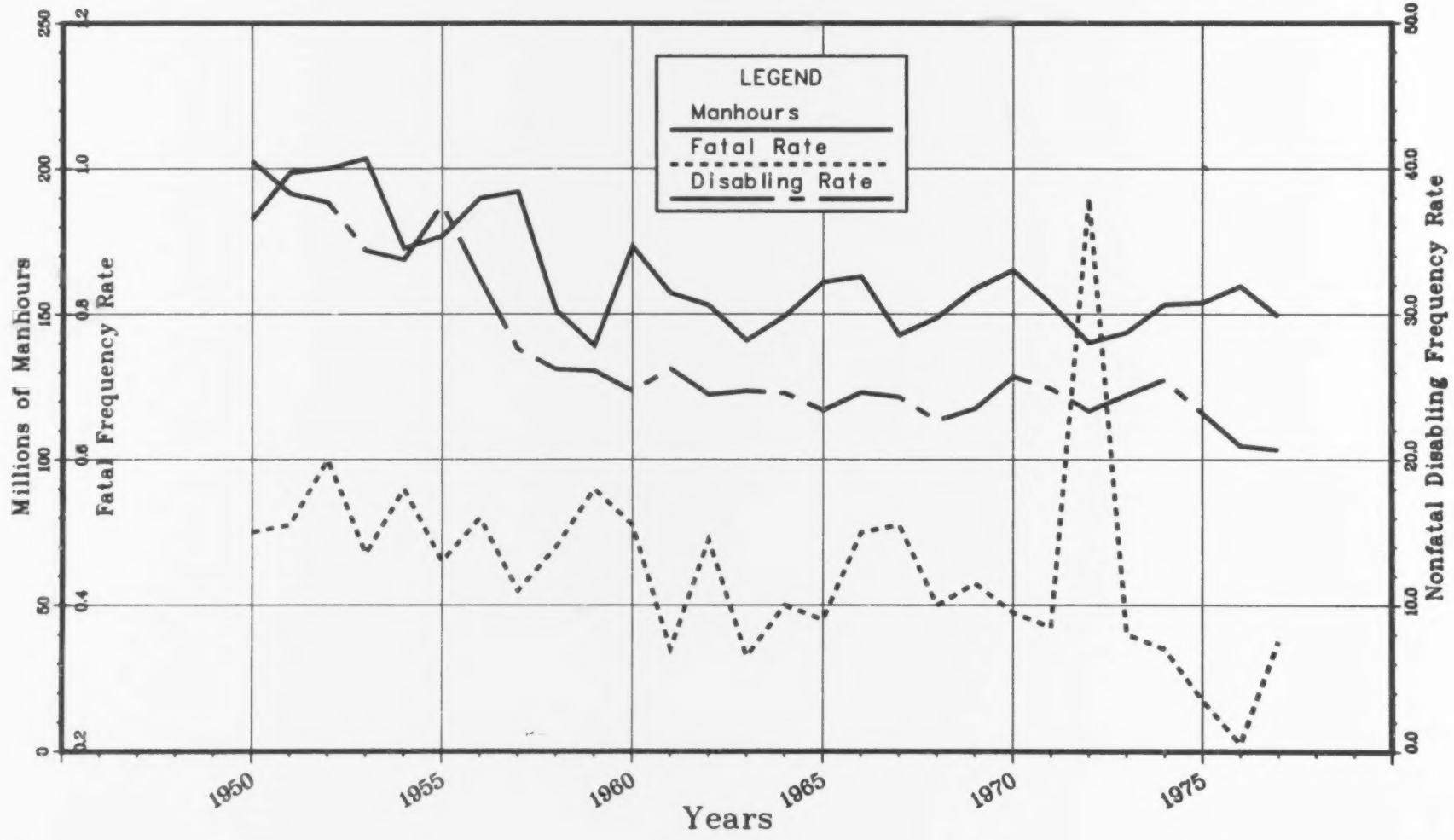

TABLE 16. - Injury experience and worktime data at metal mines and mills in the United States, 1970-77

| Year | Workers | | | | | Frequency rates per million employee-hours | | | | | Severity rates per million employee-hours | | | Number of employee-hours worked | Number of mines reporting | Number of employees reporting | Number of mines (Underground) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Fatalities | All disabling | Non-disabling | All injuries | Total | Fatalities | All disabling | Non-disabling | All injuries | Total | Fatalities | All disabling | | | | |
| 1970 | | | | NA | | | | | NA | | | NA | NA | | | | |
| 1971 | | | | NA | | | | | NA | | | NA | NA | | | | |
| 1972 | | | | NA | | | | | NA | | | NA | NA | | | | |
| 1973 | | | | NA | | | | | NA | | | NA | NA | | | | |
| 1974 | | | | NA | | | | | NA | | | NA | NA | | | | |
| 1975 | | | | NA | | | | | NA | | | NA | NA | | | | |
| 1976 | | | | NA | | | | | NA | | | NA | NA | | | | |
| 1977 | | | | NA | | | | | NA | | | NA | NA | | | | |

NA Not available.

TABLE 17. - Injury experience and exposure data at metal mines in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1931 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 57.45 | [illegible] | NA | NA | [illegible] | 232 | 16,592 | 138,237 |
| 1932 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 57.17 | [illegible] | NA | NA | 46,602 | 209 | [illegible] | 80,213 |
| 1933 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 65.51 | [illegible] | NA | NA | 49,334 | 201 | [illegible] | 80,006 |
| 1934 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 71.44 | [illegible] | NA | NA | 55,411 | 214 | 12,776 | 100,359 |
| 1935 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 63.80 | [illegible] | NA | NA | 63,975 | 215 | 15,261 | 145,134 |
| 1936 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 76.19 | [illegible] | NA | NA | 80,652 | 246 | 22,121 | 180,803 |
| 1937 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 75.97 | [illegible] | NA | NA | 105,412 | 252 | 23,296 | 219,006 |
| 1938 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 71.80 | [illegible] | NA | NA | 93,501 | 227 | 21,251 | 170,343 |
| 1939 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 74.84 | [illegible] | NA | NA | 102,275 | 233 | 23,836 | 189,334 |
| 1940 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 66.82 | [illegible] | NA | NA | 111,340 | 241 | 26,831 | 211,340 |
| 1941 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 54.47 | [illegible] | NA | NA | 114,202 | 254 | 29,034 | 230,453 |
| 1942 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 46.54 | [illegible] | NA | NA | 90,769 | 241 | 27,966 | 227,043 |
| 1943 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 46.05 | [illegible] | NA | NA | 84,980 | 243 | 25,740 | 206,442 |
| 1944 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 41.35 | [illegible] | NA | NA | 78,413 | 253 | 26,349 | 163,027 |
| 1945 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 40.57 | [illegible] | NA | NA | 61,234 | 255 | 17,671 | 141,295 |
| 1946 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 43.31 | [illegible] | NA | NA | 61,234 | 249 | 16,215 | 130,404 |
| 1947 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 43.62 | [illegible] | NA | NA | 71,228 | 271 | 19,361 | 157,024 |
| 1948 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 47.59 | [illegible] | NA | NA | 73,436 | 282 | 20,124 | 161,515 |
| 1949 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 46.08 | [illegible] | NA | NA | 71,604 | 282 | 19,867 | 144,368 |
| 1950 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 41.31 | [illegible] | NA | NA | 65,292 | 271 | 17,522 | 147,765 |
| 1951 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 41.40 | [illegible] | NA | NA | 71,603 | 274 | 19,913 | 159,417 |
| 1952 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 41.47 | [illegible] | NA | NA | 74,626 | 265 | 19,770 | 156,549 |
| 1953 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 42.10 | [illegible] | NA | NA | 72,224 | 270 | 19,359 | 156,505 |
| 1954 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 36.68 | [illegible] | NA | NA | 66,510 | 245 | 16,294 | 130,488 |
| 1955 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 38.23 | [illegible] | NA | NA | 65,143 | 263 | 17,113 | 136,950 |
| 1956 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 43.20 | [illegible] | NA | NA | 85,273 | 264 | 19,017 | 144,407 |
| 1957 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 38.38 | [illegible] | [illegible] | 5.734 | 85,457 | 259 | 17,751 | 142,181 |
| 1958 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 32.03 | [illegible] | 1,435 | 4,431 | 69,608 | 229 | 13,665 | 109,523 |
| 1959 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 32.59 | [illegible] | 1,669 | 5,136 | 74,608 | 229 | 14,603 | 100,576 |
| 1960 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 33.35 | [illegible] | 2,107 | 5,462 | 86,587 | 214 | 14,910 | 119,638 |
| 1961 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 32.41 | [illegible] | 1,690 | 5,402 | 80,595 | 246 | 14,816 | 107,678 |
| 1962 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 34.34 | [illegible] | 1,799 | 4,885 | 94,251 | 247 | 13,924 | 103,867 |
| 1963 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 32.30 | [illegible] | 1,645 | 5,469 | 92,267 | 247 | 12,046 | 97,111 |
| 1964 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 32.09 | [illegible] | 1,679 | 4,213 | 4,544 | 253 | 13,946 | 104,204 |
| 1965 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 31.7 | [illegible] | 1,68 | 4,854 | 49,765 | 261 | 12,946 | 111,277 |
| 1966 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 29.54 | [illegible] | 1,504 | 4,703 | 51,420 | 272 | 13,934 | 111,857 |
| 1967 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 31.36 | [illegible] | 1,713 | 5,136 | 49,620 | 274 | 13,944 | 97,274 |
| 1968 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 30.7 | [illegible] | 1,747 | 5,881 | 48,446 | 246 | 11,953 | 98,693 |
| 1969 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 29.91 | [illegible] | 1,643 | 4,910 | 46,180 | 266 | 12,271 | 103,973 |
| 1970 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 30.52 | [illegible] | 1,546 | 5,124 | 46,494 | 274 | 12,963 | 102,512 |
| 1971 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 28.04 | [illegible] | 1,414 | 4,587 | 46,105 | 291 | 13,416 | 101,794 |
| 1972 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 31.61 | [illegible] | 1,461 | 5,047 | 45,184 | 282 | 12,742 | 102,512 |
| 1973 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 30.52 | [illegible] | 1,411 | 5,034 | 40,110 | 294 | 11,762 | 94,882 |
| 1974 | [illegible] | [illegible] | [illegible] | NA | [illegible] | [illegible] | [illegible] | [illegible] | NA | 30.52 | [illegible] | 1,221 | 4,478 | 44,789 | NA | NA | 96,467 |
| 1975 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,553 | 4,478 | 53,168 | NA | NA | 103,381 |
| 1976 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,246 | 4,032 | 54,416 | NA | NA | 101,052 |
| 1977 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,024 | 3,434 | 54,663 | NA | NA | 99,437 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,434 | 5,125 | 52,863 | NA | NA | 94,924 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | 1,091 | 4,472 | 52,304 | NA | NA | [illegible] |

NA - Not available.

TABLE 34 - Injury experience and working data at metal mills in the United States, 1971-77 1/

| [illegible] | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average days' charges per worker-day lost | Number days worked | Man-hours worked (thousands) | Man-years worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Fatal | All disabling | Non-disabling | All cases | Fatal | Nonfatal disabling | All disabling | Non-disabling | All cases | Fatal | Nonfatal disabling | All disabling | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible]

Figure 4. - Injury-frequency rates and worktime data for all nonmetal operations in the United States, 1950-77

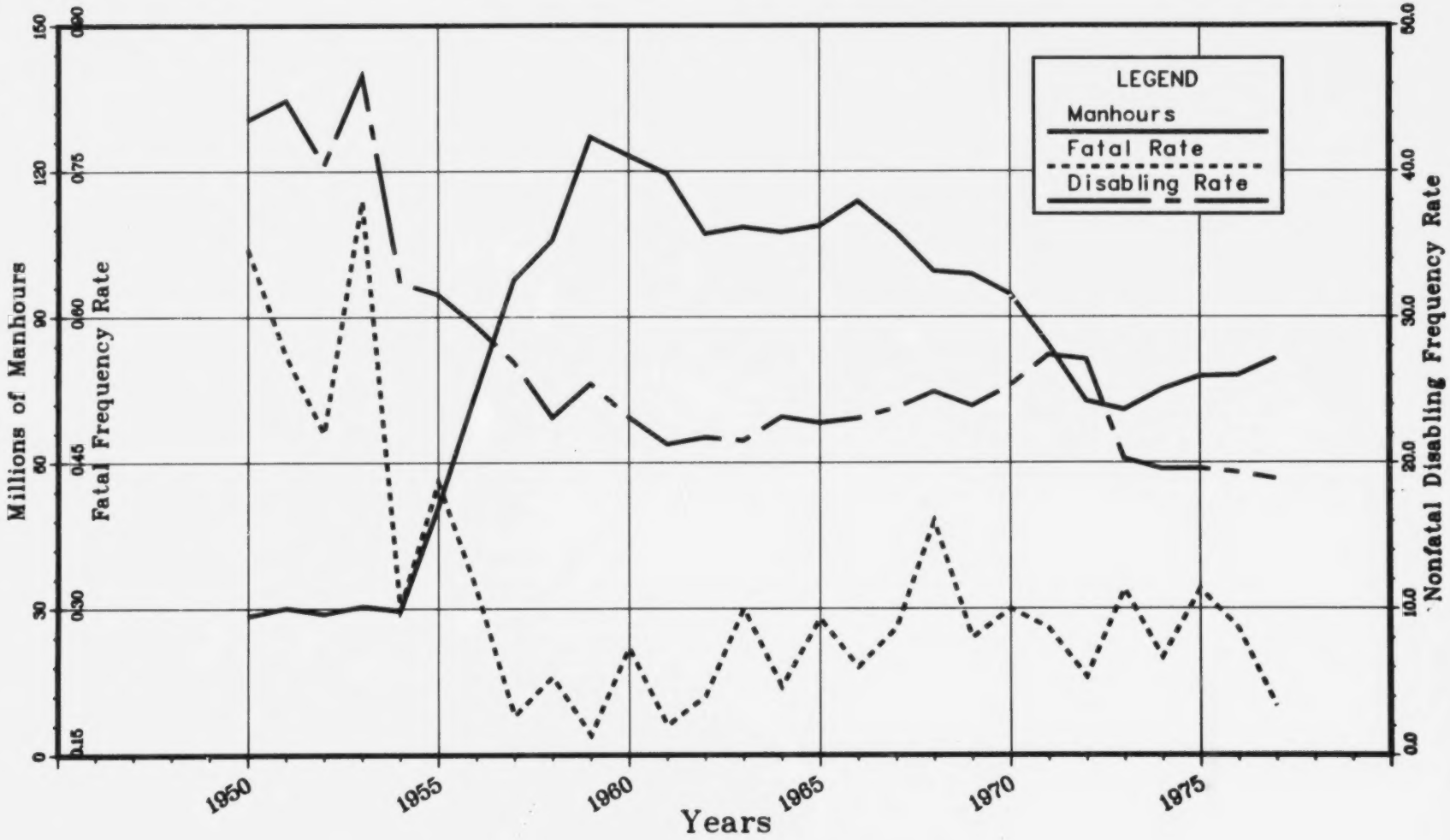

TABLE 19. - Injury experience and worktime data at nonmetal mines and mills in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1931 | 11 | 841 | 852 | NA | 852 | 0.61 | 46.88 | 47.49 | NA | 47.49 | 3,679 | NA | NA | 8,949 | 227 | 2,029 | 17,941 |
| 1932 | 10 | 524 | 534 | NA | 534 | .59 | 44.65 | 45.24 | NA | 45.24 | 3,552 | NA | NA | 6,686 | 201 | 1,347 | 11,825 |
| 1933 | 4 | 747 | 751 | NA | 751 | .37 | 52.71 | 53.28 | NA | 53.28 | 3,396 | NA | NA | 7,678 | 225 | 1,729 | 14,134 |
| 1934 | 5 | 87 | 748 | NA | 748 | .53 | 51.82 | 52.35 | NA | 52.35 | 3,161 | NA | NA | 8,234 | 236 | 1,947 | 15,187 |
| 1935 | 7 | 813 | 820 | NA | 820 | .43 | 50.28 | 50.72 | NA | 50.72 | 2,598 | NA | NA | 8,339 | 250 | 2,086 | 16,168 |
| 1936 | 4 | 1,044 | 1,048 | NA | 1,048 | .19 | 48.43 | 48.62 | NA | 48.62 | 1,113 | NA | NA | 10,380 | 259 | 2,689 | 21,556 |
| 1937 | 13 | 987 | 1,000 | NA | 1,000 | .63 | 48.06 | 48.69 | NA | 48.69 | 3,798 | NA | NA | 10,017 | 256 | 2,561 | 20,536 |
| 1938 | 6 | 726 | 732 | NA | 732 | .34 | 40.72 | 41.06 | NA | 41.06 | 2,014 | NA | NA | 9,526 | 236 | 2,251 | 17,827 |
| 1939 | 10 | 714 | 724 | NA | 724 | .55 | 41.61 | 42.19 | NA | 42.19 | 3,472 | NA | NA | 9,630 | 228 | 2,196 | 17,281 |
| 1940 | 14 | 826 | 840 | NA | 840 | .74 | 43.50 | 44.24 | NA | 44.24 | 4,424 | NA | NA | 9,780 | 247 | 2,416 | 18,988 |
| 1941 | 17 | 1,182 | 1,199 | NA | 1,199 | .73 | 50.89 | 51.63 | NA | 51.63 | 4,392 | NA | NA | 11,088 | 263 | 2,920 | 23,225 |
| 1942 | 22 | 1,537 | 1,559 | NA | 1,559 | .78 | 54.71 | 55.49 | NA | 55.49 | 4,698 | NA | NA | 12,677 | 274 | 3,473 | 28,093 |
| 1943 | 25 | 1,421 | 1,446 | NA | 1,446 | .89 | 52.54 | 53.43 | NA | 53.43 | 5,357 | NA | NA | 12,713 | 269 | 3,426 | 27,999 |
| 1944 | 17 | 1,383 | 1,400 | NA | 1,400 | .65 | 49.81 | 50.47 | NA | 50.47 | 3,960 | NA | NA | 11,261 | 282 | 3,173 | 25,760 |
| 1945 | 16 | 1,145 | 1,161 | NA | 1,161 | .65 | 46.52 | 47.17 | NA | 47.17 | 3,900 | NA | NA | 10,371 | 291 | 3,016 | 24,613 |
| 1946 | 26 | 1,369 | 1,395 | NA | 1,395 | .97 | 50.94 | 51.90 | NA | 51.90 | 5,804 | NA | NA | 11,312 | 291 | 3,297 | 26,877 |
| 1947 | 12 | 1,308 | 1,320 | NA | 1,320 | .42 | 45.40 | 45.82 | NA | 45.82 | 2,499 | NA | NA | 12,176 | 292 | 3,555 | 28,809 |
| 1948 | 15 | 1,176 | 1,191 | NA | 1,191 | .54 | 42.33 | 42.87 | NA | 42.87 | 3,239 | NA | NA | 11,950 | 287 | 3,432 | 27,784 |
| 1949 | 10 | 1,125 | 1,135 | NA | 1,135 | .37 | 41.75 | 42.12 | NA | 42.12 | 2,226 | NA | NA | 12,077 | 277 | 3,340 | 26,948 |
| 1950 | 13 | 1,238 | 1,251 | NA | 1,251 | .67 | 43.51 | 44.17 | NA | 44.17 | 4,006 | NA | NA | 11,977 | 293 | 3,512 | 28,456 |
| 1951 | 11 | 1,331 | 1,368 | NA | 1,368 | .56 | 44.84 | 45.40 | NA | 45.40 | 3,385 | NA | NA | 12,500 | 298 | 3,729 | 30,130 |
| 1952 | 14 | 1,171 | 1,185 | NA | 1,185 | .48 | 40.44 | 40.93 | NA | 40.93 | 2,901 | NA | NA | 12,447 | 288 | 3,588 | 28,954 |
| 1953 | 22 | 1,419 | 1,441 | NA | 1,441 | .72 | 46.54 | 47.26 | NA | 47.26 | 4,330 | NA | NA | 12,765 | 292 | 3,727 | 30,488 |
| 1954 | 9 | 956 | 965 | NA | 965 | .30 | 32.34 | 32.64 | NA | 32.64 | 1,827 | NA | NA | 12,810 | 284 | 3,638 | 29,564 |
| 1955 | 20 | 1,609 | 1,629 | NA | 1,629 | .43 | 31.55 | 31.98 | NA | 31.98 | 2,592 | NA | NA | 23,227 | 271 | 6,303 | 50,936 |
| 1956 | 24 | 2,193 | 2,217 | NA | 2,217 | .32 | 29.38 | 29.70 | NA | 29.70 | 1,929 | 1,386 | 3,316 | 33,180 | 278 | 9,234 | 74,639 |
| 1957 | 19 | 2,624 | 2,643 | NA | 2,643 | .19 | 26.87 | 27.07 | NA | 27.07 | 1,168 | 1,122 | 2,290 | 45,002 | 269 | 12,106 | 97,642 |
| 1958 | 24 | 2,445 | 2,469 | NA | 2,469 | .23 | 23.11 | 23.33 | NA | 23.33 | 1,361 | 977 | 2,338 | 50,221 | 260 | 13,067 | 105,809 |
| 1959 | 22 | 3,228 | 3,250 | NA | 3,250 | .17 | 25.41 | 25.58 | NA | 25.58 | 1,039 | 1,027 | 2,066 | 59,565 | 263 | 15,683 | 127,039 |
| 1960 | 32 | 2,850 | 2,882 | NA | 2,882 | .26 | 23.13 | 23.39 | NA | 23.39 | 1,559 | 975 | 2,534 | 58,221 | 261 | 15,194 | 123,191 |
| 1961 | 21 | 2,541 | 2,562 | NA | 2,562 | .18 | 21.27 | 21.45 | NA | 21.45 | 1,055 | 994 | 2,049 | 57,312 | 259 | 14,818 | 119,442 |
| 1962 | 23 | 2,327 | 2,350 | NA | 2,350 | .21 | 21.73 | 21.94 | NA | 21.94 | 1,288 | 1,113 | 2,402 | 51,817 | 253 | 13,091 | 107,105 |
| 1963 | 33 | 2,333 | 2,366 | NA | 2,366 | .30 | 21.51 | 21.81 | NA | 21.81 | 1,825 | 687 | 2,512 | 49,302 | 273 | 13,440 | 108,483 |
| 1964 | 24 | 2,486 | 2,510 | NA | 2,510 | .22 | 23.14 | 23.36 | NA | 23.36 | 1,340 | 1,160 | 2,501 | 49,054 | 272 | 13,334 | 107,438 |
| 1965 | 31 | 2,472 | 2,503 | NA | 2,503 | .29 | 22.73 | 23.02 | NA | 23.02 | 1,711 | 1,339 | 3,050 | 48,429 | 277 | 13,431 | 108,735 |
| 1966 | 27 | 2,622 | 2,649 | NA | 2,649 | .24 | 23.04 | 23.27 | NA | 23.27 | 1,423 | 1,167 | 2,591 | 50,728 | 278 | 14,079 | 113,814 |
| 1967 | 30 | 2,551 | 2,581 | NA | 2,581 | .26 | 23.75 | 24.03 | NA | 24.03 | 1,676 | 890 | 2,566 | 49,447 | 270 | 13,330 | 107,400 |
| 1968 | 30 | 2,481 | 2,511 | NA | 2,511 | .27 | 24.87 | 25.26 | NA | 25.26 | 2,356 | 980 | 3,334 | 45,576 | 269 | 12,282 | 99,414 |
| 1969 | 27 | 2,361 | 2,388 | NA | 2,388 | .27 | 23.90 | 24.17 | NA | 24.17 | 1,640 | 948 | 2,587 | 44,602 | 275 | 12,255 | 98,799 |
| 1970 | 28 | 2,394 | 2,422 | NA | 2,422 | .30 | 25.28 | 25.57 | NA | 25.57 | 1,774 | 1,143 | 2,917 | 42,461 | 277 | 11,762 | 94,707 |
| 1971 | 24 | 2,308 | 2,332 | NA | 2,332 | .28 | 27.39 | 27.67 | NA | 27.67 | 1,709 | 1,281 | 2,989 | 38,389 | 272 | 10,452 | 84,278 |
| 1972 | 17 | 1,969 | 1,986 | NA | 1,986 | .23 | 27.09 | 27.32 | NA | 27.32 | 1,403 | 919 | 2,322 | 32,249 | 279 | 8,982 | 72,686 |
| 1973 | 23 | 1,436 | 1,459 | 1,183 | 2,642 | .32 | 20.27 | 20.59 | 16.70 | 37.29 | 1,948 | 960 | 2,908 | 38,457 | NA | NA | 70,851 |
| 1974 | 19 | 1,408 | 1,427 | 1,222 | 2,709 | .25 | 19.57 | 19.82 | 16.29 | 36.11 | 1,520 | 1,130 | 2,649 | 41,623 | NA | NA | 75,015 |
| 1975 | 25 | 1,524 | 1,549 | 1,136 | 2,685 | .32 | 19.59 | 19.92 | 14.61 | 34.52 | 1,929 | 1,062 | 2,991 | 42,865 | NA | NA | 77,779 |
| 1976 | 22 | 1,507 | 1,529 | 790 | 2,319 | .28 | 19.33 | 19.62 | 10.14 | 29.75 | 1,694 | 984 | 2,677 | 41,036 | NA | NA | 77,943 |
| 1977 | 16 | 1,539 | 1,555 | 777 | 2,332 | .20 | 18.89 | 19.09 | 9.54 | 28.63 | 1,179 | 1,251 | 2,430 | 42,058 | NA | NA | 81,457 |

NA Not available.

TABLE 20. - Injury experience and worktime data at nonmetal mines in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1931 | 11 | 841 | 852 | NA | 852 | 0.61 | 46.88 | 47.49 | NA | 47.49 | 3,679 | NA | NA | 5,949 | 227 | 2,029 | 17,941 |
| 1932 | 7 | 528 | 535 | NA | 535 | .54 | 44.65 | 45.24 | NA | 45.24 | 3,552 | NA | NA | 6,656 | 201 | 1,347 | 11,925 |
| 1933 | 5 | 748 | 753 | NA | 753 | .53 | 52.71 | 53.24 | NA | 53.24 | 4,396 | NA | NA | 7,678 | 225 | 1,729 | 14,134 |
| 1934 | 5 | 787 | 795 | NA | 795 | .53 | 51.82 | 52.35 | NA | 52.35 | 3,161 | NA | NA | 5,234 | 236 | 1,847 | 15,167 |
| 1935 | 7 | 813 | 820 | NA | 820 | .43 | 50.29 | 50.72 | NA | 50.72 | 2,598 | NA | NA | 5,339 | 250 | 2,086 | 16,168 |
| 1936 | 4 | 1,044 | 1,048 | NA | 1,048 | .19 | 48.43 | 48.62 | NA | 48.62 | 1,113 | NA | NA | 10,380 | 259 | 2,689 | 21,356 |
| 1937 | 13 | 987 | 1,000 | NA | 1,000 | .63 | 48.06 | 48.69 | NA | 48.69 | 3,798 | NA | NA | 10,017 | 256 | 2,561 | 20,536 |
| 1938 | 6 | 726 | 732 | NA | 732 | .34 | 40.72 | 41.06 | NA | 41.06 | 2,019 | NA | NA | 9,526 | 236 | 2,251 | 17,927 |
| 1939 | 10 | 719 | 729 | NA | 729 | .56 | 41.61 | 42.19 | NA | 42.19 | 3,472 | NA | NA | 9,630 | 225 | 2,196 | 17,661 |
| 1940 | 14 | 826 | 840 | NA | 840 | .74 | 43.50 | 44.24 | NA | 44.24 | 4,424 | NA | NA | 9,740 | 247 | 2,416 | 19,488 |
| 1941 | 17 | 1,182 | 1,199 | NA | 1,199 | .73 | 50.89 | 51.63 | NA | 51.63 | 4,392 | NA | NA | 11,088 | 263 | 2,920 | 23,425 |
| 1942 | 22 | 1,537 | 1,559 | NA | 1,559 | .78 | 54.71 | 55.49 | NA | 55.49 | 4,694 | NA | NA | 12,677 | 274 | 3,473 | 28,063 |
| 1943 | 25 | 1,471 | 1,496 | NA | 1,496 | .89 | 52.54 | 53.43 | NA | 53.43 | 5,357 | NA | NA | 13,713 | 269 | 3,426 | 27,999 |
| 1944 | 17 | 1,283 | 1,300 | NA | 1,300 | .66 | 49.81 | 50.47 | NA | 50.47 | 3,960 | NA | NA | 11,261 | 262 | 3,173 | 24,760 |
| 1945 | 16 | 1,146 | 1,161 | NA | 1,161 | .65 | 46.52 | 47.17 | NA | 47.17 | 3,900 | NA | NA | 10,371 | 241 | 3,016 | 24,613 |
| 1946 | 26 | 1,369 | 1,395 | NA | 1,395 | .97 | 50.94 | 51.90 | NA | 51.90 | 5,804 | NA | NA | 11,312 | 291 | 3,297 | 26,857 |
| 1947 | 12 | 1,308 | 1,320 | NA | 1,320 | .42 | 45.40 | 45.82 | NA | 45.82 | 2,499 | NA | NA | 12,176 | 292 | 3,555 | 28,809 |
| 1948 | 15 | 1,176 | 1,191 | NA | 1,191 | .54 | 42.33 | 42.87 | NA | 42.87 | 3,234 | NA | NA | 11,990 | 287 | 3,432 | 27,784 |
| 1949 | 10 | 1,125 | 1,135 | NA | 1,135 | .37 | 41.75 | 42.12 | NA | 42.12 | 2,226 | NA | NA | 12,077 | 277 | 3,340 | 26,945 |
| 1950 | 19 | 1,238 | 1,257 | NA | 1,257 | .67 | 43.51 | 44.17 | NA | 44.17 | 4,006 | NA | NA | 11,477 | 293 | 3,512 | 28,436 |
| 1951 | 17 | 1,351 | 1,368 | NA | 1,368 | .56 | 44.84 | 45.40 | NA | 45.40 | 3,385 | NA | NA | 12,500 | 295 | 3,729 | 30,190 |
| 1952 | 14 | 1,171 | 1,185 | NA | 1,185 | .48 | 40.44 | 40.93 | NA | 40.93 | 2,901 | NA | NA | 12,447 | 285 | 3,588 | 28,954 |
| 1953 | 22 | 1,419 | 1,441 | NA | 1,441 | .72 | 46.54 | 47.26 | NA | 47.26 | 4,330 | NA | NA | 12,765 | 292 | 3,727 | 30,485 |
| 1954 | 9 | 956 | 965 | NA | 965 | .30 | 32.34 | 32.64 | NA | 32.64 | 1,827 | NA | NA | 12,810 | 254 | 3,635 | 29,364 |
| 1955 | 19 | 1,156 | 1,175 | NA | 1,175 | .61 | 37.18 | 37.79 | NA | 37.79 | 3,666 | NA | NA | 14,504 | 264 | 3,830 | 31,003 |
| 1956 | 17 | 1,036 | 1,053 | NA | 1,053 | .50 | 30.50 | 31.00 | NA | 31.00 | 3,003 | 1,739 | 4,742 | 15,595 | 268 | 4,178 | 33,963 |
| 1957 | 9 | 1,112 | 1,121 | NA | 1,121 | .24 | 29.36 | 29.60 | NA | 29.60 | 1,426 | 1,658 | 3,084 | 17,921 | 262 | 4,691 | 37,877 |
| 1958 | 15 | 955 | 970 | NA | 970 | .43 | 27.56 | 28.00 | NA | 28.00 | 2,588 | 1,548 | 4,136 | 17,620 | 239 | 4,254 | 34,648 |
| 1959 | 11 | 1,072 | 1,083 | NA | 1,083 | .30 | 29.50 | 29.81 | NA | 29.81 | 1,816 | 1,240 | 3,056 | 18,765 | 239 | 4,488 | 36,334 |
| 1960 | 19 | 1,056 | 1,075 | NA | 1,075 | .52 | 28.69 | 29.21 | NA | 29.21 | 3,097 | 1,381 | 4,478 | 18,653 | 242 | 4,515 | 36,805 |
| 1961 | 15 | 861 | 876 | NA | 876 | .42 | 24.24 | 24.66 | NA | 24.66 | 2,534 | 1,524 | 4,058 | 18,281 | 238 | 4,347 | 35,517 |
| 1962 | 14 | 944 | 958 | NA | 958 | .43 | 29.06 | 29.49 | NA | 29.49 | 2,586 | 1,688 | 4,274 | 16,917 | 235 | 3,979 | 32,454 |
| 1963 | 31 | 857 | 888 | NA | 888 | .95 | 26.34 | 27.29 | NA | 27.29 | 5,716 | 914 | 6,630 | 15,570 | 256 | 3,988 | 32,539 |
| 1964 | 18 | 906 | 924 | NA | 924 | .50 | 25.18 | 25.68 | NA | 25.68 | 3,002 | 1,387 | 4,389 | 17,057 | 259 | 4,420 | 35,977 |
| 1965 | 21 | 989 | 1,010 | NA | 1,010 | .56 | 26.19 | 26.75 | NA | 26.75 | 3,337 | 1,711 | 5,048 | 17,214 | 268 | 4,612 | 37,760 |
| 1966 | 16 | 1,058 | 1,074 | NA | 1,074 | .39 | 25.80 | 26.19 | NA | 26.19 | 2,341 | 1,265 | 3,586 | 18,727 | 268 | 5,027 | 41,008 |
| 1967 | 17 | 1,026 | 1,043 | NA | 1,043 | .44 | 26.61 | 27.06 | NA | 27.06 | 2,646 | 853 | 3,499 | 18,020 | 264 | 4,765 | 38,550 |
| 1968 | 36 | 953 | 989 | NA | 989 | 1.01 | 26.74 | 27.76 | NA | 27.76 | 6,062 | 1,120 | 7,182 | 16,630 | 262 | 4,352 | 35,633 |
| 1969 | 17 | 880 | 897 | NA | 897 | .48 | 25.04 | 25.52 | NA | 25.52 | 2,902 | 1,102 | 4,004 | 16,587 | 262 | 4,341 | 35,147 |
| 1970 | 16 | 799 | 815 | NA | 815 | .56 | 24.65 | 25.21 | NA | 25.21 | 3,332 | 1,080 | 4,412 | 15,336 | 261 | 4,010 | 32,414 |
| 1971 | 15 | 741 | 756 | NA | 756 | .53 | 25.95 | 26.48 | NA | 26.48 | 3,152 | 1,470 | 4,622 | 14,069 | 251 | 3,526 | 28,559 |
| 1972 | 10 | 621 | 631 | NA | 631 | .39 | 24.49 | 24.89 | NA | 24.89 | 2,367 | 1,165 | 3,531 | 12,276 | 255 | 3,126 | 25,353 |
| 1973 | 16 | 806 | 822 | 723 | 1,545 | .55 | 27.73 | 28.28 | 24.85 | 53.16 | 3,303 | 1,377 | 4,680 | 16,805 | NA | NA | 29,061 |
| 1974 | 14 | 869 | 883 | 719 | 1,602 | .44 | 27.34 | 27.78 | 22.62 | 50.40 | 2,643 | 1,331 | 3,974 | 19,567 | NA | NA | 31,787 |
| 1975 | 13 | 858 | 871 | 641 | 1,512 | .37 | 24.21 | 24.58 | 18.09 | 42.67 | 2,201 | 1,427 | 3,628 | 20,861 | NA | NA | 35,437 |
| 1976 | 14 | 666 | 680 | 359 | 1,039 | .45 | 21.32 | 21.77 | 11.49 | 33.26 | 2,889 | 1,191 | 3,880 | 17,617 | NA | NA | 31,236 |
| 1977 | 10 | 621 | 631 | 331 | 962 | .31 | 19.41 | 19.72 | 10.34 | 30.06 | 1,875 | 1,240 | 3,165 | 17,450 | NA | NA | 32,000 |

NA Not available

Table 21. - Injury experience and working data at nonmetal mills in the United States, 1955-71 1/

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1955 | | | | | | | | | NA | | 907 | NA | NA | 6,723 | 283 | 2,467 | 19,843 |
| 1956 | | | | NA | | | | | NA | | 1,033 | | | 17,585 | 288 | 5,056 | 40,675 |
| 1957 | | | | NA | | | | | NA | | 1,004 | | | 27,081 | 274 | 7,415 | 59,765 |
| 1958 | | | | NA | | | | | NA | | 754 | | | 32,401 | 272 | 8,809 | 71,161 |
| 1959 | | | | NA | | | | | NA | | 728 | | | 40,800 | 274 | 11,195 | 90,706 |
| 1960 | | | | NA | | | | | NA | | 903 | | | 39,568 | 270 | 10,679 | 86,386 |
| 1961 | | | | NA | | | | | NA | | 829 | | | 39,031 | 268 | 10,471 | 83,925 |
| 1962 | | | | NA | | | | | NA | | 724 | | | 34,900 | 261 | 9,112 | 74,621 |
| 1963 | | | | NA | | | | | NA | | 558 | | | 33,732 | 280 | 9,452 | 75,944 |
| 1964 | | | | NA | | | | | NA | | 504 | | | 31,967 | 279 | 8,914 | 71,461 |
| 1965 | | | | NA | | | | | NA | | 565 | | | 31,215 | 283 | 8,819 | 70,975 |
| 1966 | | | | NA | | | | | NA | | 906 | | | 32,001 | 283 | 9,052 | 72,810 |
| 1967 | | | | NA | | | | | NA | | 1,133 | | | 31,427 | 273 | 8,565 | 68,850 |
| 1968 | | | | NA | | | | | NA | | 282 | | | 28,946 | 274 | 7,930 | 63,781 |
| 1969 | | | | NA | | | | | NA | | 943 | | | 28,015 | 282 | 7,914 | 63,651 |
| 1970 | | | | NA | | | | | NA | | 963 | | | 27,125 | 286 | 7,752 | 62,293 |
| 1971 | | | | NA | | | | | NA | | 969 | | | 24,320 | 285 | 6,926 | 55,723 |
| 1972 | | | | NA | | | | | NA | | 887 | | | 19,973 | 293 | 5,856 | 47,333 |
| 1973 | | | | | | | | | | | 1,005 | | | 21,652 | NA | NA | 41,790 |
| 1974 | | | | | | | | | | | 694 | | | 23,036 | NA | NA | 43,228 |
| 1975 | | | | | | | | | | | 1,700 | | | 22,004 | NA | NA | 42,341 |
| 1976 | | | | | | | | | | | 1,028 | | | 23,419 | NA | NA | 46,707 |
| 1977 | | | | | | | | | | | 728 | | | 24,608 | NA | NA | 49,457 |

NA Not available.
1/ Clay mill data first compiled in 1970.

Figure 5. - Injury-frequency rates and worktime data for all stone operations in the United States, 1950-77

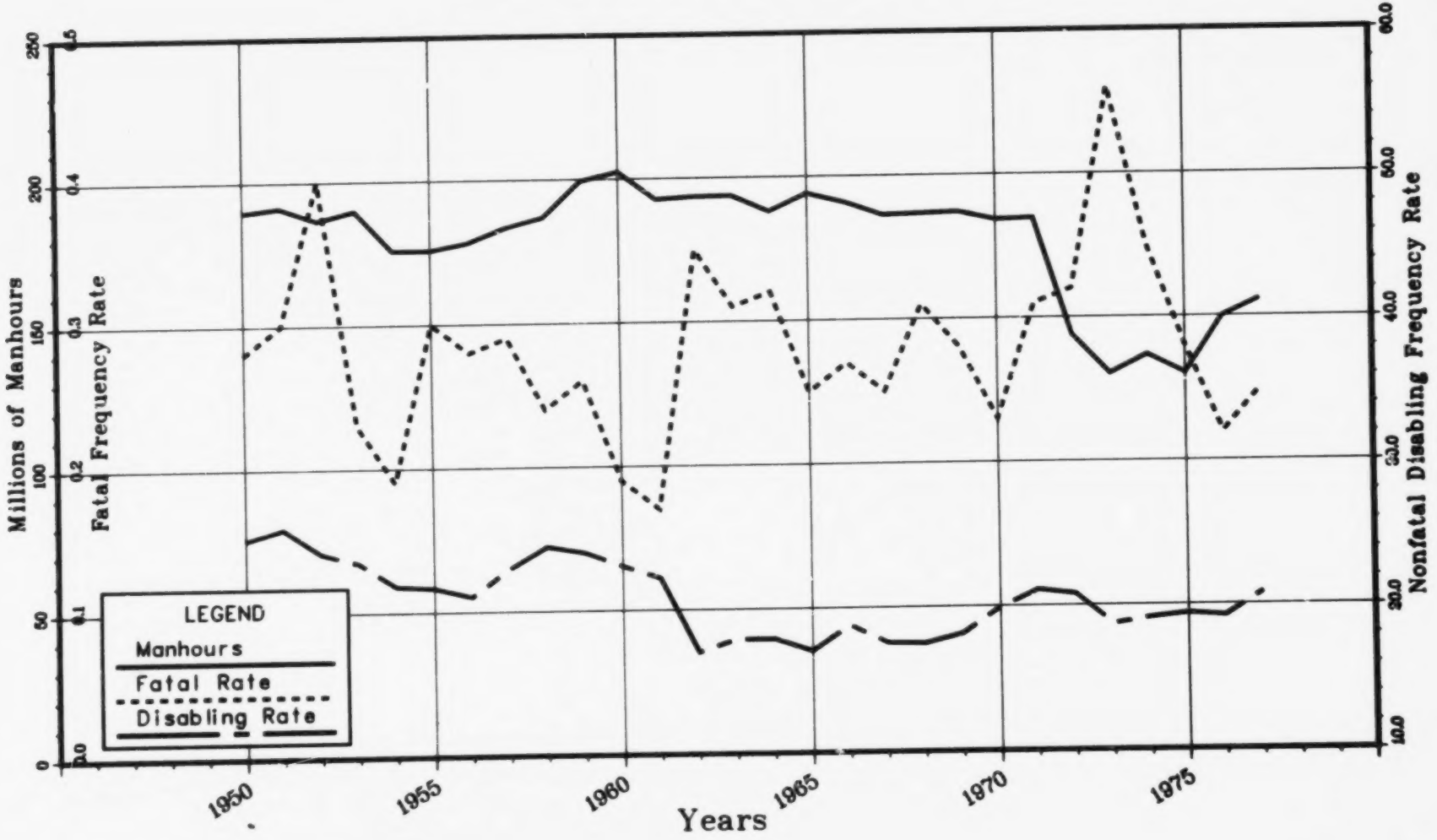

TABLE 22. - Injury experience and worktime data at stone quarries and mills in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1931 | 61 | 5,427 | 5,488 | NA | 5,488 | [illegible] | 40.58 | 41.03 | NA | 41.03 | 2,736 | NA | NA | 49,200 | 224 | 15,527 | 133,750 |
| 1932 | 32 | 3,574 | 3,606 | NA | 3,606 | .34 | 38.14 | 38.48 | NA | 38.48 | 2,049 | NA | NA | 36,866 | 195 | 11,114 | 95,710 |
| 1933 | 59 | 3,637 | 3,696 | NA | 3,696 | .67 | 41.38 | 42.05 | NA | 42.05 | 4,128 | NA | NA | 61,927 | 183 | 17,362 | 87,888 |
| 1934 | 60 | 3,924 | 3,984 | NA | 3,984 | .63 | 41.19 | 41.82 | NA | 41.82 | 3,779 | NA | NA | 64,131 | 204 | 17,108 | 95,259 |
| 1935 | 51 | 4,152 | 4,203 | NA | 4,203 | .46 | 37.73 | 38.20 | NA | 38.20 | 2,781 | NA | NA | 73,005 | 200 | 14,623 | 111,033 |
| 1936 | 41 | 5,717 | 5,858 | NA | 5,858 | .42 | 38.87 | 39.49 | NA | 39.49 | 3,713 | NA | NA | 84,022 | 236 | 19,874 | 147,464 |
| 1937 | 77 | 6,348 | 6,425 | NA | 6,425 | .49 | 40.10 | 40.59 | NA | 40.59 | 2,919 | NA | NA | 84,094 | 241 | 20,264 | 158,299 |
| 1938 | 82 | 5,027 | 5,109 | NA | 5,109 | .61 | 37.58 | 38.19 | NA | 38.19 | 3,678 | NA | NA | 77,497 | 221 | 17,256 | 135,766 |
| 1939 | 48 | 5,204 | 5,252 | NA | 5,252 | .33 | 36.18 | 36.51 | NA | 36.51 | 2,092 | NA | NA | 79,449 | 230 | 18,726 | 141,847 |
| 1940 | 72 | 5,188 | 5,260 | NA | 5,260 | .49 | 35.23 | 35.72 | NA | 35.72 | 2,934 | NA | NA | 79,509 | 24 | 19,121 | 142,244 |
| 1941 | 76 | 6,870 | 6,946 | NA | 6,946 | .44 | 39.67 | 40.11 | NA | 40.11 | 2,633 | NA | NA | 86,123 | 26 | 22,370 | 171,165 |
| 1942 | 112 | 7,349 | 7,461 | NA | 7,461 | .62 | 35.11 | 35.73 | NA | 35.73 | 3,716 | NA | NA | 84,270 | 271 | 22,858 | 14,830 |
| 1943 | 9 | 5,199 | 5,274 | NA | 5,274 | .52 | 33.48 | 34.00 | NA | 34.00 | 3,091 | NA | NA | 69,877 | 274 | 19,136 | 155,280 |
| 1944 | 73 | 4,437 | 4,510 | NA | 4,510 | .56 | 34.32 | 34.88 | NA | 34.88 | 3,387 | NA | NA | 58,476 | 268 | 15,691 | 129,302 |
| 1945 | 53 | 4,121 | 4,174 | NA | 4,174 | .42 | 32.41 | 32.82 | NA | 32.82 | 2,501 | NA | NA | 58,180 | 264 | 15,376 | 127,148 |
| 1946 | 55 | 5,137 | 5,192 | NA | 5,192 | .35 | 32.40 | 32.75 | NA | 32.75 | 2,082 | NA | NA | 70,265 | 274 | 19,262 | 158,526 |
| 1947 | 75 | 5,504 | 5,579 | NA | 5,579 | .44 | 32.00 | 32.44 | NA | 32.44 | 2,617 | NA | NA | 75,245 | 279 | 20,996 | 171,979 |
| 1948 | 75 | 4,994 | 5,069 | NA | 5,069 | .42 | 27.88 | 28.30 | NA | 28.30 | 2,512 | NA | NA | 77,344 | 284 | 21,993 | 179,111 |
| 1949 | 66 | 4,826 | 4,892 | NA | 4,892 | .36 | 26.48 | 26.84 | NA | 26.84 | 2,173 | NA | NA | 82,209 | 275 | 22,569 | 182,258 |
| 1950 | 54 | 4,762 | 4,816 | NA | 4,816 | .28 | 25.12 | 25.41 | NA | 25.41 | 1,709 | NA | NA | 85,730 | 272 | 23,346 | 189,535 |
| 1951 | 57 | 4,945 | 5,002 | NA | 5,002 | .30 | 25.87 | 26.17 | NA | 26.17 | 1,790 | NA | NA | 84,802 | 277 | 23,470 | 191,113 |
| 1952 | 74 | 4,503 | 4,577 | NA | 4,577 | .40 | 24.14 | 24.53 | NA | 24.53 | 2,380 | NA | NA | 81,879 | 279 | 22,844 | 186,552 |
| 1953 | 43 | 4,450 | 4,493 | NA | 4,493 | .23 | 23.45 | 23.68 | NA | 23.68 | 1,359 | NA | NA | 83,641 | 278 | 23,248 | 189,777 |
| 1954 | 34 | 3,834 | 3,868 | NA | 3,868 | .19 | 21.81 | 22.00 | NA | 22.00 | 1,160 | NA | NA | 78,910 | 273 | 21,506 | 175,817 |
| 1955 | 53 | 3,811 | 3,864 | NA | 3,864 | .30 | 21.68 | 21.98 | NA | 21.98 | 1,809 | NA | NA | 78,238 | 274 | 21,470 | 175,775 |
| 1956 | 50 | 3,754 | 3,804 | NA | 3,804 | .28 | 21.06 | 21.34 | NA | 21.34 | 1,683 | NA | NA | 80,093 | 272 | 21,776 | 178,281 |
| 1957 | 53 | 4,210 | 4,263 | NA | 4,263 | .29 | 22.96 | 23.25 | NA | 23.25 | 1,734 | NA | NA | 84,126 | 266 | 22,410 | 183,394 |
| 1958 | 45 | 4,572 | 4,617 | NA | 4,617 | .24 | 24.47 | 24.71 | NA | 24.71 | 1,445 | NA | NA | 88,448 | 264 | 23,353 | 186,821 |
| 1959 | 52 | 4,790 | 4,842 | NA | 4,842 | .26 | 24.03 | 24.29 | NA | 24.29 | 1,565 | NA | NA | 91,523 | NA | NA | 199,321 |
| 1960 | 39 | 4,668 | 4,707 | NA | 4,707 | .19 | 23.07 | 23.26 | NA | 23.26 | 1,156 | NA | NA | 95,304 | NA | NA | 202,366 |
| 1961 | 32 | 4,280 | 4,312 | NA | 4,312 | .17 | 22.21 | 22.38 | NA | 22.38 | 996 | NA | NA | 91,371 | 257 | 23,524 | 192,705 |
| 1962 | 67 | 3,299 | 3,366 | NA | 3,366 | .35 | 17.05 | 17.40 | NA | 17.40 | 2,078 | 968 | 3,046 | 92,241 | 254 | 23,393 | 193,453 |
| 1963 | 61 | 3,468 | 3,529 | NA | 3,529 | .31 | 17.91 | 18.22 | NA | 18.22 | 1,890 | 1,023 | 2,913 | 91,960 | 256 | 23,553 | 193,685 |
| 1964 | 61 | 3,367 | 3,428 | NA | 3,428 | .32 | 17.91 | 18.23 | NA | 18.23 | 1,947 | 814 | 2,761 | 87,859 | 260 | 22,873 | 188,900 |
| 1965 | 48 | 3,305 | 3,353 | NA | 3,353 | .25 | 17.04 | 17.28 | NA | 17.28 | 1,485 | 845 | 2,330 | 89,580 | 263 | 23,535 | 194,600 |
| 1966 | 51 | 3,583 | 3,634 | NA | 3,634 | .27 | 18.78 | 19.05 | NA | 19.05 | 1,604 | 1,248 | 2,852 | 85,826 | 269 | 23,113 | 191,787 |
| 1967 | 46 | 3,267 | 3,313 | NA | 3,313 | .25 | 17.54 | 17.79 | NA | 17.79 | 1,482 | 826 | 2,308 | 84,765 | 266 | 22,548 | 186,227 |
| 1968 | 58 | 3,260 | 3,318 | NA | 3,318 | .31 | 17.47 | 17.78 | NA | 17.78 | 1,865 | 835 | 2,700 | 84,084 | 268 | 22,543 | 186,620 |
| 1969 | 53 | 3,389 | 3,442 | NA | 3,442 | .28 | 18.12 | 18.41 | NA | 18.41 | 1,701 | 934 | 2,634 | 83,149 | 272 | 22,586 | 187,003 |
| 1970 | 43 | 3,666 | 3,709 | NA | 3,709 | .23 | 19.90 | 20.13 | NA | 20.13 | 1,400 | 891 | 2,292 | 82,010 | 269 | 22,082 | 184,225 |
| 1971 | 58 | 3,893 | 3,951 | NA | 3,951 | .31 | 21.09 | 21.40 | NA | 21.40 | 1,885 | 899 | 2,784 | 82,806 | 267 | 22,126 | 184,615 |
| 1972 | 46 | 2,992 | 3,038 | NA | 3,038 | .32 | 20.79 | 21.11 | NA | 21.11 | 1,918 | 862 | 2,780 | 63,991 | 269 | 17,191 | 143,927 |
| 1973 | 61 | 2,436 | 2,496 | 2,099 | 4,595 | .46 | 18.70 | 19.16 | 16.11 | 35.26 | 2,763 | 891 | 3,654 | 72,712 | NA | NA | 130,302 |
| 1974 | 48 | 2,613 | 2,661 | 2,057 | 4,718 | .35 | 19.11 | 19.46 | 15.05 | 34.51 | 2,107 | 1,185 | 3,292 | 79,741 | NA | NA | 136,707 |
| 1975 | 36 | 2,526 | 2,562 | 1,812 | 4,374 | .28 | 19.39 | 19.67 | 13.91 | 33.58 | 1,658 | 977 | 2,635 | 77,428 | NA | NA | 130,275 |
| 1976 | 33 | 2,879 | 2,912 | 1,598 | 4,510 | .22 | 19.21 | 19.43 | 10.66 | 30.09 | 1,321 | 1,028 | 2,349 | 81,609 | NA | NA | 149,868 |
| 1977 | 39 | 3,248 | 3,287 | 1,796 | 5,083 | .25 | 20.84 | 21.09 | 11.52 | 32.62 | 1,501 | 1,307 | 2,808 | 83,527 | NA | NA | 155,845 |

NA Not available.

Table 23. - Injury experience and workforce data at stone quarries in the United States, 1931-77

| | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1931 | 30 | 1,700 | 1,730 | NA | 1,760 | 0.49 | 28.03 | 28.52 | NA | 29.02 | 5,330 | NA | NA | 13,221 | 198 | 2,578 | 56,280 |
| 1932 | 16 | 1,370 | 1,386 | NA | 1,414 | .29 | 25.46 | 25.75 | NA | 26.30 | 2,456 | NA | NA | 24,104 | 175 | 4,564 | 38,563 |
| 1933 | 40 | 1,400 | 1,440 | NA | 1,480 | 1.14 | 39.93 | 41.07 | NA | 42.21 | 6,957 | NA | NA | 27,743 | 166 | 4,612 | 36,223 |
| 1934 | 4 | 1,470 | 1,474 | NA | 1,482 | .11 | 40.49 | 40.60 | NA | 40.85 | 1,210 | NA | NA | 27,273 | 182 | 4,953 | 37,445 |
| 1935 | 17 | 1,702 | 1,719 | NA | 1,736 | .44 | 43.95 | 44.39 | NA | 44.83 | 4,444 | NA | NA | 32,629 | 177 | 5,762 | 44,267 |
| 1936 | 23 | 1,934 | 1,957 | NA | 1,980 | .59 | 49.54 | 50.13 | NA | 50.72 | 5,322 | NA | NA | 35,637 | 210 | 7,495 | 59,756 |
| 1937 | 25 | 2,459 | 2,484 | NA | 2,509 | .74 | 72.10 | 72.84 | NA | 73.58 | 6,902 | NA | NA | 36,879 | 215 | 7,938 | 63,283 |
| 1938 | 8 | 2,028 | 2,036 | NA | 2,044 | .23 | 58.49 | 58.72 | NA | 58.95 | 2,302 | NA | NA | 33,344 | 199 | 6,624 | 52,158 |
| 1939 | 7 | 1,993 | 2,000 | NA | 2,007 | .19 | 54.00 | 54.19 | NA | 54.38 | 1,900 | NA | NA | 34,100 | 209 | 7,114 | 55,835 |
| 1940 | 5 | 1,995 | 2,000 | NA | 2,005 | .14 | 56.61 | 56.75 | NA | 56.89 | 1,419 | NA | NA | 33,374 | 212 | 7,063 | 55,538 |
| 1941 | 29 | 2,114 | 2,143 | NA | 2,172 | .81 | 59.38 | 60.19 | NA | 61.00 | 5,618 | NA | NA | 35,946 | 233 | 8,393 | 66,363 |
| 1942 | 19 | 2,134 | 2,153 | NA | 2,172 | .54 | 60.82 | 61.36 | NA | 61.90 | 3,882 | NA | NA | 34,048 | 241 | 8,210 | 67,152 |
| 1943 | 14 | 2,018 | 2,032 | NA | 2,046 | .39 | 56.01 | 56.40 | NA | 56.79 | 2,705 | NA | NA | 34,048 | 241 | 8,210 | 67,152 |
| 1944 | 10 | 1,819 | 1,829 | NA | 1,839 | .28 | 50.78 | 51.06 | NA | 51.34 | 1,959 | NA | NA | 26,798 | 257 | 6,880 | 55,832 |
| 1945 | 12 | 1,647 | 1,659 | NA | 1,671 | .34 | 46.00 | 46.34 | NA | 46.68 | 2,274 | NA | NA | 23,940 | 254 | 6,067 | 45,877 |
| 1946 | 13 | 1,548 | 1,561 | NA | 1,574 | .37 | 44.01 | 44.37 | NA | 44.74 | 2,551 | NA | NA | 23,553 | 244 | 5,961 | 43,507 |
| 1947 | 14 | 1,626 | 1,640 | NA | 1,654 | .34 | 44.51 | 44.84 | NA | 45.18 | 3,237 | NA | NA | 30,625 | 250 | 7,658 | 63,023 |
| 1948 | 10 | 1,574 | 1,584 | NA | 1,594 | .23 | 43.51 | 44.41 | NA | 44.41 | 3,460 | NA | NA | 31,786 | 256 | 8,209 | 67,243 |
| 1949 | 8 | 1,574 | 1,582 | NA | 1,590 | .19 | 43.49 | 43.68 | NA | 43.87 | 3,470 | NA | NA | 33,191 | 258 | 8,566 | 69,762 |
| 1950 | 9 | 1,614 | 1,623 | NA | 1,632 | .20 | 34.21 | 34.41 | NA | 34.61 | 3,938 | NA | NA | 36,025 | 246 | 8,867 | 71,607 |
| 1951 | 10 | 1,636 | 1,646 | NA | 1,656 | .23 | 36.07 | 36.30 | NA | 36.53 | 2,427 | NA | NA | 38,279 | 247 | 9,439 | 76,632 |
| 1952 | 10 | 1,636 | 1,646 | NA | 1,656 | .23 | 37.33 | 37.56 | NA | 37.76 | 2,587 | NA | NA | 37,346 | 252 | 9,398 | 76,527 |
| 1953 | 15 | 1,677 | 1,692 | NA | 1,707 | .34 | 34.02 | 34.37 | NA | 35.17 | 3,865 | NA | NA | 36,634 | 249 | 9,135 | 76,063 |
| 1954 | 14 | 1,668 | 1,682 | NA | 1,696 | .31 | 34.38 | 34.69 | NA | 34.69 | 1,838 | NA | NA | 37,991 | 248 | 9,435 | 78,329 |
| 1955 | 7 | 1,854 | 1,861 | NA | 1,868 | .16 | 36.16 | 36.32 | NA | 36.32 | 2,152 | NA | NA | 34,889 | 241 | 8,404 | 69,691 |
| 1956 | 7 | 1,913 | 1,920 | NA | 1,927 | .16 | 37.47 | 37.63 | NA | 37.46 | 3,102 | NA | NA | 33,605 | 242 | 8,144 | 67,698 |
| 1957 | 13 | 2,005 | 2,018 | NA | 2,031 | .30 | 35.30 | 35.60 | NA | 35.80 | 3,001 | NA | NA | 35,574 | 236 | 8,410 | 69,981 |
| 1958 | 11 | 1,930 | 1,941 | NA | 1,952 | .25 | 39.72 | 39.97 | NA | 40.14 | 2,543 | NA | NA | 37,599 | 235 | 8,817 | 73,136 |
| 1959 | 10 | 1,901 | 1,911 | NA | 1,921 | .23 | 36.79 | 37.02 | NA | 37.16 | 2,229 | NA | NA | 36,126 | 242 | 8,748 | 69,986 |
| 1960 | 8 | 1,698 | 1,706 | NA | 1,714 | .18 | 33.02 | 33.20 | NA | 33.42 | 2,391 | NA | NA | 38,439 | NA | NA | 75,292 |
| 1961 | 7 | 1,643 | 1,650 | NA | 1,657 | .16 | 33.86 | 34.02 | NA | 34.02 | 1,665 | NA | NA | 38,031 | NA | NA | 72,071 |
| 1962 | 10 | 1,671 | 1,681 | NA | 1,691 | .23 | 32.53 | 32.76 | NA | 32.76 | 1,731 | NA | NA | 36,942 | 226 | 8,358 | 69,314 |
| 1963 | 14 | 1,213 | 1,227 | NA | 1,241 | .34 | 23.21 | 23.76 | NA | 23.76 | 3,269 | 1,289 | 4,558 | 36,993 | 224 | 8,284 | 69,748 |
| 1964 | 13 | 1,244 | 1,257 | NA | 1,270 | .31 | 23.13 | 23.65 | NA | 23.65 | 3,041 | 1,267 | 4,308 | 37,404 | 227 | 8,482 | 71,026 |
| 1965 | 13 | 1,240 | 1,253 | NA | 1,266 | .34 | 23.60 | 24.15 | NA | 24.15 | 3,259 | 1,068 | 4,327 | 37,568 | 230 | 8,630 | 71,808 |
| 1966 | 10 | 1,174 | 1,184 | NA | 1,194 | .23 | 20.29 | 20.62 | NA | 20.62 | 1,998 | 878 | 2,876 | 39,452 | 237 | 9,337 | 78,062 |
| 1967 | 12 | 1,174 | 1,186 | NA | 1,198 | .42 | 23.54 | 23.96 | NA | 23.96 | 2,525 | 1,509 | 4,033 | 36,590 | 240 | 8,793 | 73,671 |
| 1968 | 10 | 1,531 | 1,541 | NA | 1,551 | .34 | 20.66 | 21.00 | NA | 21.00 | 2,057 | 829 | 2,886 | 35,966 | 242 | 8,686 | 72,905 |
| 1969 | 13 | 1,543 | 1,556 | NA | 1,569 | .49 | 20.85 | 21.34 | NA | 21.34 | 2,925 | 1,001 | 3,926 | 36,090 | 243 | 8,767 | 73,843 |
| 1970 | 14 | 1,548 | 1,562 | NA | 1,576 | .54 | 20.43 | 20.98 | NA | 20.98 | 3,250 | 1,091 | 4,341 | 35,209 | 247 | 8,691 | 73,844 |
| 1971 | 10 | 1,774 | 1,784 | NA | 1,794 | .40 | 24.24 | 24.64 | NA | 24.64 | 2,390 | 1,062 | 3,452 | 35,284 | 242 | 8,547 | 72,803 |
| 1972 | 13 | 1,808 | 1,821 | NA | 1,834 | .51 | 24.74 | 25.25 | NA | 25.25 | 3,079 | 969 | 4,048 | 35,764 | 237 | 8,478 | 72,111 |
| 1973 | 11 | 1,096 | 1,107 | NA | 1,118 | .44 | 20.89 | 21.33 | NA | 21.33 | 2,659 | 932 | 3,591 | 26,006 | 234 | 6,076 | 51,896 |
| 1974 | 15 | 1,210 | 1,225 | 1,465 | 3,225 | .59 | 24.76 | 25.35 | 21.13 | 46.49 | 3,542 | 1,140 | 4,681 | 39,686 | NA | NA | 69,459 |
| 1975 | 12 | 1,192 | 1,204 | 1,343 | 3,219 | .47 | 24.04 | 25.01 | 19.04 | 44.04 | 2,794 | 1,507 | 4,301 | 45,121 | NA | NA | 73,021 |
| 1976 | 11 | 1,174 | 1,185 | 1,304 | 3,057 | .42 | 25.02 | 25.45 | 16.99 | 42.44 | 2,532 | 1,282 | 3,814 | 45,204 | NA | NA | 71,094 |
| 1977 | 13 | 1,044 | 1,057 | 921 | 2,569 | .49 | 24.63 | 24.91 | 12.84 | 37.75 | 1,708 | 1,253 | 2,960 | 38,602 | NA | NA | 66,759 |
| 1978 | 11 | 1,042 | 1,053 | 925 | 2,589 | .41 | 23.86 | 24.14 | 13.55 | 37.71 | 1,650 | 1,726 | 3,575 | 38,617 | NA | NA | 68,118 |

NA Not available.

TABLE 24. - Injury experience and worktime data at stone mills in the United States, 1931-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1931 | 11 | 2,037 | 2,048 | NA | 2,048 | 0.14 | 26.29 | 26.44 | NA | 26.44 | 852 | NA | NA | 35,979 | 249 | 8,948 | 77,470 |
| 1932 | 13 | 1,422 | 1,435 | NA | 1,435 | .24 | 25.79 | 26.02 | NA | 26.02 | 1,414 | NA | NA | 30,758 | 213 | 6,550 | 59,147 |
| 1933 | 17 | 1,372 | 1,389 | NA | 1,389 | .33 | 26.56 | 26.88 | NA | 26.88 | 1,974 | NA | NA | 34,184 | 197 | 6,750 | 61,665 |
| 1934 | 13 | 1,342 | 1,355 | NA | 1,355 | .26 | 23.21 | 23.47 | NA | 23.47 | 1,557 | NA | NA | 37,058 | 220 | 8,155 | 57,811 |
| 1935 | 16 | 1,440 | 1,456 | NA | 1,456 | .24 | 21.90 | 22.14 | NA | 22.14 | 1,460 | NA | NA | 40,376 | 219 | 8,861 | 65,766 |
| 1936 | 38 | 2,183 | 2,221 | NA | 2,221 | .44 | 25.00 | 25.44 | NA | 25.44 | 2,611 | NA | NA | 44,385 | 256 | 11,380 | 87,808 |
| 1937 | 30 | 2,415 | 2,445 | NA | 2,445 | .32 | 25.45 | 25.76 | NA | 25.76 | 1,894 | NA | NA | 47,215 | 261 | 12,326 | 93,015 |
| 1938 | 22 | 1,899 | 1,921 | NA | 1,921 | .27 | 23.27 | 23.54 | NA | 23.54 | 1,617 | NA | NA | 44,153 | 241 | 10,632 | 81,605 |
| 1939 | 17 | 1,829 | 1,846 | NA | 1,846 | .19 | 20.78 | 20.97 | NA | 20.97 | 1,159 | NA | NA | 45,349 | 256 | 11,612 | 88,812 |
| 1940 | 20 | 2,044 | 2,064 | NA | 2,064 | .22 | 22.29 | 22.51 | NA | 22.51 | 1,309 | NA | NA | 46,131 | 261 | 12,058 | 91,706 |
| 1941 | 22 | 2,800 | 2,822 | NA | 2,822 | .21 | 26.22 | 26.42 | NA | 26.42 | 1,236 | NA | NA | 50,177 | 279 | 13,977 | 106,502 |
| 1942 | 25 | 2,802 | 2,830 | NA | 2,830 | .25 | 24.65 | 24.89 | NA | 24.89 | 1,478 | NA | NA | 50,222 | 291 | 14,598 | 113,683 |
| 1943 | 32 | 2,424 | 2,456 | NA | 2,456 | .32 | 24.37 | 24.70 | NA | 24.70 | 1,931 | NA | NA | 43,079 | 284 | 12,255 | 99,448 |
| 1944 | 29 | 2,189 | 2,214 | NA | 2,214 | .30 | 26.24 | 26.54 | NA | 26.54 | 1,798 | NA | NA | 36,536 | 277 | 10,124 | 83,425 |
| 1945 | 20 | 2,041 | 2,061 | NA | 2,061 | .24 | 24.40 | 24.64 | NA | 24.64 | 1,434 | NA | NA | 36,627 | 276 | 10,116 | 83,661 |
| 1946 | 21 | 2,345 | 2,366 | NA | 2,366 | .22 | 24.55 | 24.77 | NA | 24.77 | 1,319 | NA | NA | 39,640 | 293 | 11,604 | 95,506 |
| 1947 | 36 | 2,557 | 2,593 | NA | 2,593 | .34 | 24.41 | 24.76 | NA | 24.76 | 2,062 | NA | NA | 43,459 | 294 | 12,787 | 104,736 |
| 1948 | 30 | 2,169 | 2,199 | NA | 2,199 | .27 | 19.84 | 20.11 | NA | 20.11 | 1,646 | NA | NA | 44,153 | 304 | 13,427 | 109,349 |
| 1949 | 19 | 2,018 | 2,037 | NA | 2,037 | .17 | 18.24 | 18.41 | NA | 18.41 | 1,030 | NA | NA | 46,184 | 297 | 13,702 | 110,651 |
| 1950 | 23 | 1,998 | 2,021 | NA | 2,021 | .20 | 17.70 | 17.90 | NA | 17.90 | 1,222 | NA | NA | 47,451 | 293 | 13,907 | 112,903 |
| 1951 | 24 | 2,088 | 2,112 | NA | 2,112 | .21 | 18.22 | 18.43 | NA | 18.43 | 1,257 | NA | NA | 47,456 | 297 | 14,072 | 114,586 |
| 1952 | 25 | 1,877 | 1,902 | NA | 1,902 | .23 | 16.99 | 17.21 | NA | 17.21 | 1,358 | NA | NA | 45,240 | 303 | 13,709 | 110,489 |
| 1953 | 19 | 1,757 | 1,776 | NA | 1,776 | .17 | 15.77 | 15.94 | NA | 15.94 | 1,023 | NA | NA | 45,650 | 303 | 13,813 | 111,447 |
| 1954 | 9 | 1,314 | 1,323 | NA | 1,323 | .08 | 12.38 | 12.47 | NA | 12.47 | 509 | NA | NA | 44,021 | 298 | 13,102 | 106,126 |
| 1955 | 18 | 1,276 | 1,294 | NA | 1,294 | .17 | 11.81 | 11.97 | NA | 11.97 | 999 | NA | NA | 44,033 | 299 | 13,326 | 108,077 |
| 1956 | 15 | 1,284 | 1,299 | NA | 1,299 | .14 | 11.86 | 11.99 | NA | 11.99 | 831 | NA | NA | 44,514 | 300 | 13,367 | 108,300 |
| 1957 | 22 | 1,305 | 1,327 | NA | 1,327 | .20 | 11.84 | 12.04 | NA | 12.04 | 1,197 | NA | NA | 46,527 | 292 | 13,593 | 110,258 |
| 1958 | 19 | 1,997 | 2,016 | NA | 2,016 | .16 | 17.09 | 17.26 | NA | 17.26 | 976 | NA | NA | 52,322 | 279 | 14,604 | 116,835 |
| 1959 | 22 | 2,304 | 2,326 | NA | 2,326 | .18 | 18.58 | 18.75 | NA | 18.75 | 1,064 | NA | NA | 53,085 | NA | NA | 124,030 |
| 1960 | 19 | 2,236 | 2,255 | NA | 2,255 | .15 | 17.16 | 17.31 | NA | 17.31 | 875 | NA | NA | 57,273 | NA | NA | 130,295 |
| 1961 | 12 | 2,029 | 2,041 | NA | 2,041 | .10 | 16.44 | 16.54 | NA | 16.54 | 584 | NA | NA | 54,429 | 279 | 15,166 | 123,391 |
| 1962 | 24 | 1,680 | 1,709 | NA | 1,709 | .23 | 13.58 | 13.82 | NA | 13.82 | 1,407 | 787 | 2,194 | 55,248 | 273 | 15,109 | 123,705 |
| 1963 | 25 | 1,824 | 1,849 | NA | 1,849 | .20 | 14.87 | 15.07 | NA | 15.07 | 1,223 | 882 | 2,105 | 54,556 | 276 | 15,071 | 122,659 |
| 1964 | 22 | 1,672 | 1,694 | NA | 1,694 | .19 | 14.39 | 14.58 | NA | 14.58 | 1,136 | 657 | 1,793 | 50,291 | 283 | 14,242 | 116,192 |
| 1965 | 22 | 1,721 | 1,743 | NA | 1,743 | .19 | 14.84 | 15.03 | NA | 15.03 | 1,139 | 823 | 1,961 | 50,128 | 283 | 14,198 | 115,938 |
| 1966 | 20 | 1,849 | 1,869 | NA | 1,869 | .17 | 15.79 | 15.96 | NA | 15.96 | 1,025 | 1,084 | 2,108 | 49,236 | 291 | 14,320 | 117,117 |
| 1967 | 21 | 1,761 | 1,782 | NA | 1,782 | .19 | 15.54 | 15.73 | NA | 15.73 | 1,112 | 823 | 1,935 | 48,799 | 284 | 13,862 | 113,321 |
| 1968 | 22 | 1,720 | 1,742 | NA | 1,742 | .20 | 15.25 | 15.45 | NA | 15.45 | 1,170 | 726 | 1,896 | 47,994 | 287 | 13,777 | 112,777 |
| 1969 | 13 | 1,880 | 1,893 | NA | 1,893 | .11 | 16.61 | 16.73 | NA | 16.73 | 689 | 831 | 1,520 | 47,940 | 290 | 13,894 | 113,159 |
| 1970 | 14 | 1,901 | 1,915 | NA | 1,915 | .13 | 17.06 | 17.19 | NA | 17.19 | 754 | 780 | 1,534 | 46,726 | 290 | 13,535 | 111,422 |
| 1971 | 21 | 2,109 | 2,130 | NA | 2,130 | .19 | 18.75 | 18.93 | NA | 18.93 | 1,120 | 854 | 1,974 | 47,042 | 290 | 13,648 | 112,504 |
| 1972 | 23 | 1,908 | 1,931 | NA | 1,931 | .25 | 20.73 | 20.98 | NA | 20.98 | 1,499 | 823 | 2,322 | 37,985 | 293 | 11,115 | 92,031 |
| 1973 | 19 | 716 | 735 | 631 | 1,366 | .31 | 11.77 | 12.08 | 10.37 | 22.45 | 1,874 | 606 | 2,480 | 33,026 | NA | NA | 80,843 |
| 1974 | 14 | 821 | 835 | 664 | 1,499 | .22 | 12.89 | 13.11 | 10.43 | 23.54 | 1,319 | 817 | 2,136 | 34,620 | NA | NA | 83,686 |
| 1975 | 6 | 747 | 753 | 604 | 1,357 | .10 | 12.62 | 12.72 | 10.21 | 22.93 | 608 | 612 | 1,220 | 32,224 | NA | NA | 59,181 |
| 1976 | 14 | 1,235 | 1,249 | 741 | 1,990 | .17 | 14.86 | 15.03 | 8.92 | 23.94 | 1,011 | 847 | 1,858 | 43,007 | NA | NA | 83,110 |
| 1977 | 18 | 1,623 | 1,641 | 873 | 2,514 | .21 | 18.50 | 18.71 | 9.95 | 28.66 | 1,231 | 981 | 2,212 | 44,910 | NA | NA | 87,727 |

NA Not available.

Figure 6. - Injury-frequency rates and worktime data for all sand and gravel operations in the United States, 1958-77

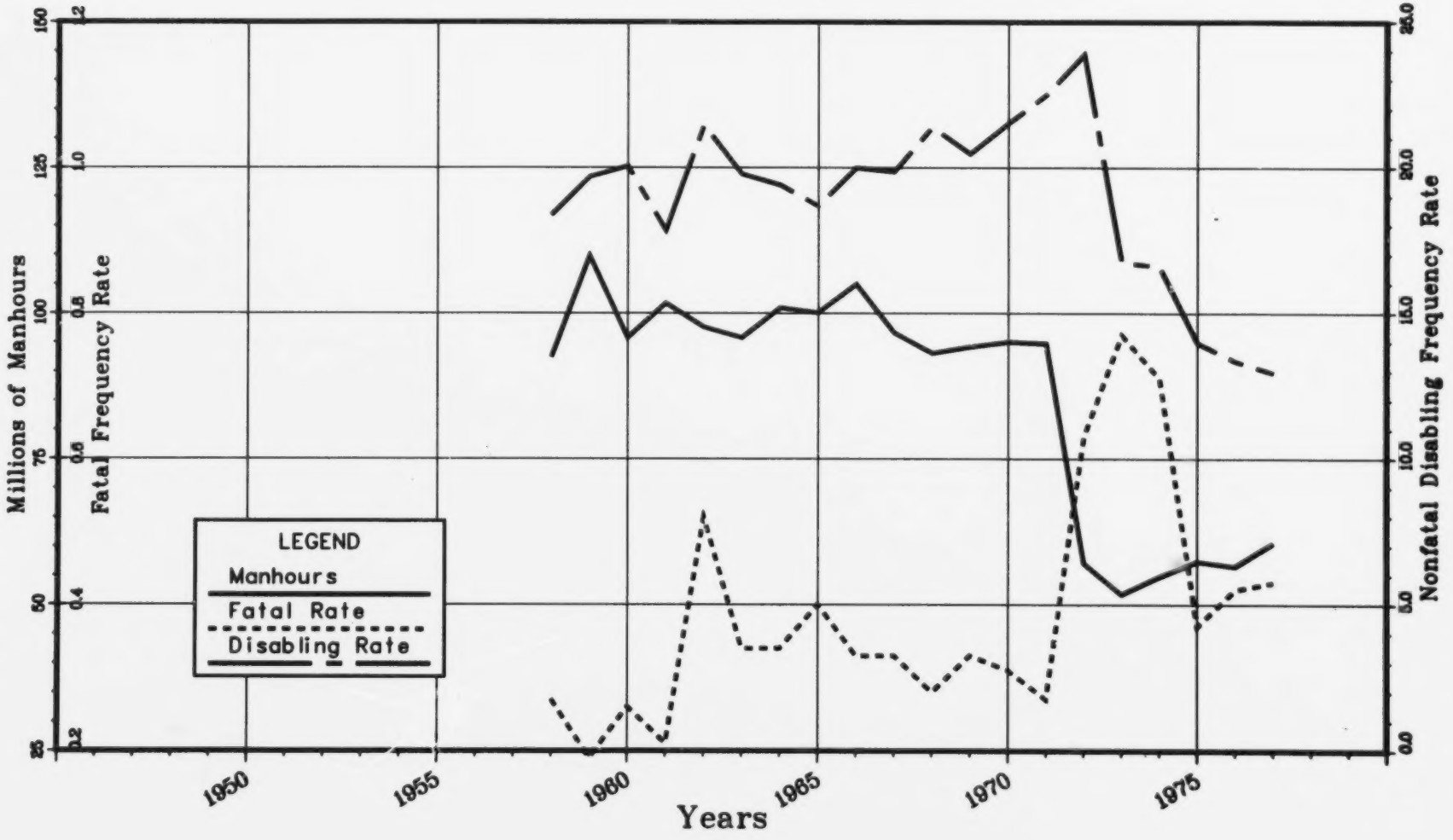

TABLE 25 - Injury experience and worktime data at sand and gravel plants in the United States, 1958-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Average days active | Man-days worked (thousands) | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | | | |
| 1958 | 25 | 1,698 | 1,723 | NA | 1,723 | 0.27 | 18.37 | 18.64 | NA | 18.64 | 1,622 | 856 | 2,478 | 51,122 | 211 | 10,763 | 92,456 |
| 1959 | 21 | 2,161 | 2,182 | NA | 2,182 | .19 | 19.68 | 19.87 | NA | 19.87 | 1,147 | 825 | 1,972 | 59,492 | NA | NA | 109,830 |
| 1960 | 25 | 1,919 | 1,944 | NA | 1,944 | .26 | 20.04 | 20.30 | NA | 20.30 | 1,567 | 868 | 2,434 | 52,352 | NA | NA | 95,749 |
| 1961 | 21 | 1,814 | 1,835 | NA | 1,835 | .21 | 17.84 | 18.04 | NA | 18.04 | 1,239 | 1,092 | 2,331 | 55,726 | 217 | 12,117 | 101,707 |
| 1962 | 51 | 2,093 | 2,144 | NA | 2,144 | .52 | 21.45 | 21.97 | NA | 21.97 | 3,136 | 1,096 | 4,232 | 53,599 | 218 | 11,690 | 97,589 |
| 1963 | 33 | 1,894 | 1,927 | NA | 1,927 | .34 | 19.77 | 20.12 | NA | 20.12 | 2,067 | 1,028 | 3,095 | 52,804 | 216 | 11,400 | 95,786 |
| 1964 | 34 | 1,957 | 1,991 | NA | 1,991 | .34 | 19.40 | 19.73 | NA | 19.73 | 2,022 | 1,215 | 3,237 | 55,886 | 217 | 12,129 | 100,891 |
| 1965 | 40 | 1,870 | 1,910 | NA | 1,910 | .40 | 18.68 | 19.08 | NA | 19.08 | 2,398 | 816 | 3,214 | 54,159 | 221 | 11,947 | 100,083 |
| 1966 | 35 | 2,098 | 2,133 | NA | 2,133 | .33 | 19.99 | 20.32 | NA | 20.32 | 2,001 | 901 | 2,901 | 55,364 | 225 | 12,459 | 104,971 |
| 1967 | 32 | 1,919 | 1,951 | NA | 1,951 | .33 | 19.86 | 20.19 | NA | 20.19 | 1,987 | 946 | 2,933 | 52,363 | 216 | 11,296 | 96,645 |
| 1968 | 26 | 1,992 | 2,018 | NA | 2,018 | .28 | 21.38 | 21.66 | NA | 21.66 | 1,675 | 1,014 | 2,688 | 49,901 | 219 | 10,930 | 93,156 |
| 1969 | 31 | 1,929 | 1,960 | NA | 1,960 | .33 | 20.47 | 20.80 | NA | 20.80 | 1,974 | 1,050 | 3,024 | 50,161 | 219 | 10,964 | 94,223 |
| 1970 | 29 | 2,045 | 2,074 | NA | 2,074 | .31 | 21.51 | 21.82 | NA | 21.82 | 1,830 | 1,022 | 2,853 | 50,674 | 218 | 11,034 | 95,067 |
| 1971 | 26 | 2,132 | 2,158 | NA | 2,158 | .27 | 22.49 | 22.77 | NA | 22.77 | 1,646 | 969 | 2,615 | 50,502 | 217 | 10,977 | 94,786 |
| 1972 | 36 | 1,364 | 1,400 | NA | 1,400 | .63 | 23.88 | 24.51 | NA | 24.51 | 3,782 | 1,134 | 4,916 | 30,928 | 212 | 6,568 | 57,114 |
| 1973 | 40 | 867 | 907 | 688 | 1,595 | .77 | 16.75 | 17.52 | 13.29 | 30.82 | 4,637 | 785 | 5,421 | 34,808 | NA | NA | 51,760 |
| 1974 | 39 | 910 | 949 | 654 | 1,603 | .71 | 16.61 | 17.32 | 11.93 | 29.25 | 4,270 | 877 | 5,147 | 42,399 | NA | NA | 54,800 |
| 1975 | 21 | 803 | 824 | 593 | 1,417 | .37 | 13.99 | 14.35 | 10.33 | 24.68 | 2,195 | 991 | 3,086 | 44,068 | NA | NA | 57,413 |
| 1976 | 24 | 755 | 779 | 435 | 1,214 | .42 | 13.35 | 13.78 | 7.69 | 21.47 | 2,546 | 952 | 3,499 | 39,532 | NA | NA | 56,551 |
| 1977 | 26 | 784 | 810 | 505 | 1,315 | .43 | 12.95 | 13.38 | 8.34 | 21.72 | 2,577 | 763 | 3,340 | 41,564 | NA | NA | 60,533 |

NA Not available.

TABLE 26. - Count of operations and average men working daily at metal, nonmetal, stone, and sand and gravel operations by general work location with summarized data, 1950-77 1/

| Year | Underground and associated surface 2/ | | | | | | | | Open pit and other surface 2/ | | | | | | | | | | | | Mills | | | | | | | | Summary total 2/ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Metal | | Nonmetal 3/ | | Stone | | Total | | Metal | | Nonmetal 3/ | | Stone | | S & G | | Total | | | | Metal | | Nonmetal 4/ | | Stone | | Total | | | | | | | | | | | |
| | Ct | Men | Ct | Men | Ct | Men | Ct | Men | Ct | Men | Ct | Men | Ct | Men | Ct | Men | Ct | Men | | | Ct | Men | Ct | Men | Ct | Men | Ct | Men | | | | | | | | | | |
| 1950 | NA | 59,523 | NA | NA | NA | 4,474 | NA | 63,997 | NA | 20,746 | NA | NA | NA | 33,805 | NA | NA | NA | 54,551 | | | NA | 14,956 | NA | NA | NA | 47,451 | NA | 62,407 | | | | | | | | | | |
| 1951 | NA | 60,323 | NA | NA | NA | 4,410 | NA | 64,733 | NA | 23,780 | NA | NA | NA | 32,936 | NA | NA | NA | 56,716 | | | NA | 16,339 | NA | NA | NA | 47,456 | NA | 63,795 | | | | | | | | | | |
| 1952 | NA | 62,330 | NA | NA | 117 | 4,273 | NA | 66,603 | NA | 24,743 | NA | NA | 2,123 | 32,366 | NA | NA | NA | 57,109 | | | NA | 17,511 | NA | NA | NA | 45,240 | NA | 62,751 | | | | | | | | | | |
| 1953 | NA | 59,418 | NA | NA | 120 | 4,343 | NA | 63,761 | NA | 25,876 | NA | NA | 2,171 | 33,648 | NA | NA | NA | 59,524 | | | NA | 19,757 | NA | NA | NA | 45,650 | NA | 65,407 | | | | | | | | | | |
| 1954 | NA | 47,625 | NA | 7,811 | 116 | 3,349 | NA | 58,785 | NA | 18,985 | NA | 4,999 | 2,136 | 31,540 | NA | NA | NA | 55,524 | | | NA | 19,095 | NA | NA | NA | 44,021 | NA | 63,116 | | | | | | | | | | |
| 1955 | NA | 46,835 | NA | 8,149 | 107 | 3,545 | NA | 58,529 | NA | 18,308 | NA | 6,355 | 1,920 | 30,060 | NA | NA | NA | 54,723 | | | NA | 17,631 | NA | 8,723 | NA | 44,633 | NA | 70,987 | | | | | | | | | | |
| 1956 | NA | 48,107 | NA | 8,267 | 122 | 3,817 | NA | 60,191 | NA | 20,166 | NA | 7,328 | 2,126 | 31,757 | NA | NA | NA | 59,251 | | | NA | 19,261 | 483 | 17,585 | NA | 44,519 | NA | 81,365 | | | | | | | | | | |
| 1957 | NA | 48,688 | NA | 9,899 | 134 | 3,563 | NA | 62,150 | NA | 19,769 | NA | 8,022 | 2,769 | 34,036 | NA | NA | NA | 61,827 | | | NA | 21,566 | 775 | 27,081 | NA | 46,527 | NA | 95,174 | | | | | | | | | | |
| 1958 | 1,429 | 40,315 | 560 | 6,418 | 133 | 2,706 | 2,122 | 49,439 | 1,387 | 19,293 | 1,735 | 11,402 | 3,401 | 33,420 | 6,333 | 51,122 | 12,856 | 115,237 | | | 444 | 19,677 | 849 | 32,401 | NA | 52,322 | NA | 104,400 | | | | | | | | | | |
| 1959 | 1,627 | 38,532 | 394 | 6,785 | 129 | 2,845 | 2,150 | 48,162 | 1,383 | 20,025 | 2,131 | 11,980 | 3,742 | 35,593 | 6,695 | 59,492 | 13,951 | 127,090 | | | 447 | 19,423 | 1,006 | 40,800 | NA | 53,085 | NA | 113,308 | | | | | | | | | | |
| 1960 | 1,454 | 36,513 | 367 | 6,261 | 129 | 2,694 | 1,950 | 45,470 | 1,753 | 24,080 | 2,149 | 12,392 | 4,309 | 35,337 | 8,251 | 52,352 | 16,462 | 124,161 | | | 379 | 22,529 | 906 | 39,568 | NA | 57,273 | NA | 119,370 | | | | | | | | | | |
| 1961 | 1,503 | 35,147 | 384 | 6,136 | 142 | 2,668 | 2,029 | 43,951 | 1,363 | 19,104 | 2,227 | 12,145 | 4,492 | 34,274 | 8,553 | 55,726 | 16,635 | 121,249 | | | 370 | 20,518 | 996 | 39,031 | NA | 54,429 | NA | 113,978 | | | | | | | | | | |
| 1962 | 1,447 | 32,708 | 322 | 5,922 | 157 | 2,822 | 1,926 | 41,452 | 1,268 | 19,579 | 1,984 | 10,995 | 4,773 | 34,171 | 8,307 | 53,599 | 16,332 | 118,344 | 348 | 19,583 | 928 | 34,900 | 3,427 | 55,248 | 4,703 | 110,131 | 3,063 | 72,270 | 3,234 | 51,817 | 8,357 | 92,241 | 8,307 | 53,599 | 22,961 | 269,927 |
| 1963 | 1,498 | 30,221 | 215 | 5,604 | 144 | 2,939 | 1,857 | 38,764 | 1,235 | 17,623 | 1,880 | 9,966 | 4,929 | 34,465 | 9,244 | 52,804 | 17,288 | 114,858 | 325 | 18,016 | 896 | 33,732 | 3,673 | 54,556 | 4,894 | 106,304 | 3,058 | 65,860 | 2,991 | 49,302 | 8,746 | 91,960 | 9,244 | 52,804 | 24,039 | 259,926 |
| 1964 | 1,356 | 31,749 | 213 | 6,036 | 138 | 2,833 | 1,707 | 40,618 | 1,007 | 18,016 | 1,977 | 11,051 | 4,910 | 34,735 | 9,667 | 55,886 | 17,561 | 119,688 | 291 | 18,375 | 911 | 31,967 | 3,354 | 50,291 | 4,556 | 100,633 | 2,654 | 68,140 | 3,101 | 49,054 | 8,402 | 87,859 | 9,667 | 55,886 | 23,824 | 260,939 |
| 1965 | 1,270 | 31,716 | 202 | 5,875 | 156 | 3,113 | 1,628 | 40,657 | 967 | 19,704 | 1,965 | 11,386 | 5,258 | 36,319 | 9,807 | 54,159 | 17,997 | 121,588 | 278 | 19,484 | 845 | 31,215 | 3,585 | 50,128 | 4,708 | 100,827 | 2,515 | 70,904 | 3,012 | 48,429 | 8,999 | 89,580 | 9,807 | 54,159 | 24,333 | 263,072 |
| 1966 | 1,374 | 30,734 | 178 | 5,792 | 147 | 3,013 | 1,699 | 39,539 | 983 | 19,186 | 2,086 | 12,935 | 5,171 | 33,577 | 11,240 | 55,344 | 19,480 | 121,042 | 290 | 20,175 | 930 | 32,001 | 3,544 | 49,236 | 4,764 | 101,412 | 2,647 | 70,095 | 3,194 | 50,728 | 8,862 | 85,826 | 11,240 | 55,344 | 25,943 | 261,993 |
| 1967 | 1,159 | 29,102 | 178 | 5,731 | 158 | 2,938 | 1,495 | 37,771 | 872 | 19,394 | 1,998 | 12,289 | 5,215 | 33,028 | 10,168 | 52,363 | 18,253 | 117,074 | 281 | 20,928 | 933 | 31,427 | 3,443 | 48,799 | 4,657 | 101,154 | 2,312 | 69,424 | 3,109 | 49,447 | 8,816 | 84,765 | 10,168 | 52,363 | 24,405 | 255,999 |
| 1968 | 1,137 | 26,263 | 168 | 5,207 | 152 | 2,916 | 1,457 | 34,386 | 1,437 | 19,917 | 2,070 | 11,423 | 4,968 | 33,174 | 9,464 | 49,901 | 17,939 | 114,415 | 250 | 20,298 | 887 | 28,946 | 3,595 | 47,994 | 4,732 | 97,238 | 2,824 | 66,479 | 3,125 | 45,576 | 8,715 | 84,084 | 9,464 | 49,901 | 24,128 | 246,039 |
| 1969 | 890 | 26,078 | 145 | 4,705 | 152 | 2,785 | 1,187 | 33,568 | 1,442 | 20,416 | 2,065 | 11,882 | 4,904 | 32,424 | 9,440 | 50,161 | 17,851 | 114,883 | 248 | 22,271 | 863 | 28,015 | 3,499 | 47,940 | 4,610 | 98,226 | 2,580 | 68,765 | 3,073 | 44,602 | 8,555 | 83,149 | 9,440 | 50,161 | 23,648 | 246,677 |
| 1970 | 1,052 | 26,182 | 162 | 4,961 | 158 | 2,871 | 1,372 | 34,014 | 834 | 19,926 | 1,857 | 10,375 | 4,957 | 32,413 | 9,653 | 50,674 | 17,301 | 113,388 | 266 | 21,535 | 859 | 27,125 | 3,373 | 46,726 | 4,498 | 95,386 | 2,152 | 67,643 | 2,878 | 42,461 | 8,488 | 82,010 | 9,653 | 50,674 | 23,171 | 242,788 |
| 1971 | 941 | 25,084 | 163 | 4,818 | 162 | 2,622 | 1,266 | 32,524 | 872 | 20,105 | 1,837 | 9,251 | 5,017 | 33,142 | 9,479 | 50,502 | 17,205 | 113,000 | 288 | 20,173 | 912 | 24,320 | 3,558 | 47,042 | 4,758 | 91,535 | 2,101 | 65,362 | 2,912 | 38,389 | 8,737 | 82,806 | 9,479 | 50,502 | 23,229 | 237,059 |
| 1972 | 437 | 22,037 | 144 | 4,843 | 114 | 2,169 | 695 | 28,849 | 339 | 18,073 | 1,334 | 7,633 | 2,920 | 23,837 | 4,802 | 30,928 | 9,395 | 80,471 | 233 | 17,837 | 763 | 19,973 | 2,227 | 37,985 | 3,223 | 75,795 | 1,009 | 57,947 | 2,241 | 32,249 | 5,261 | 63,991 | 4,[illegible] | 30,928 | 13,313 | 185,115 |
| 1973 | 318 | 23,009 | 129 | 5,912 | 185 | 2,446 | 572 | 31,367 | 232 | 26,780 | 1,019 | 10,893 | 2,916 | 37,240 | 3,510 | 34,808 | 7,677 | 109,721 | 242 | 24,819 | 696 | 21,652 | 1,472 | 33,026 | 2,410 | 79,497 | 792 | 74,608 | 1,864 | 38,457 | 4,513 | 72,712 | 3,510 | 34,808 | 10,659 | 220,585 |
| 1974 | 371 | 25,674 | 122 | 6,292 | 136 | 2,972 | 629 | 34,938 | 230 | 27,496 | 1,169 | 12,295 | 3,299 | 42,149 | 4,882 | 42,399 | 6,580 | 126,337 | 263 | 26,960 | 801 | 23,036 | 1,522 | 34,620 | 2,586 | 84,616 | 864 | 80,128 | 2,092 | 41,623 | 4,957 | 79,741 | 4,882 | 42,399 | 12,795 | 243,891 |
| 1975 | 460 | 27,528 | 123 | 7,335 | 137 | 3,048 | 720 | 37,911 | 270 | 26,688 | 1,297 | 13,526 | 3,709 | 42,156 | 5,875 | 44,068 | 11,151 | 126,438 | 289 | 28,897 | 899 | 22,004 | 1,567 | 32,224 | 2,755 | 83,125 | 1,019 | 83,113 | 2,319 | 42,865 | 5,413 | 77,428 | 5,875 | 44,068 | 14,626 | 247,474 |
| 1976 | 485 | 26,794 | 120 | 6,240 | 134 | 2,380 | 739 | 35,414 | 253 | 25,869 | 1,263 | 11,377 | 3,759 | 36,222 | 6,570 | 39,532 | 11,845 | 113,000 | 296 | 29,535 | 990 | 23,419 | 1,792 | 43,007 | 3,076 | 95,961 | 1,032 | 82,198 | 2,373 | 41,036 | 5,685 | 81,609 | 6,570 | 39,532 | 15,660 | 244,375 |
| 1977 | 475 | 26,227 | 120 | 6,136 | 138 | 2,451 | 733 | 34,814 | 257 | 26,077 | 1,228 | 11,314 | 3,684 | 36,166 | 6,881 | 41,564 | 12,050 | 115,121 | 295 | 29,573 | 993 | 24,608 | 1,832 | 44,910 | 3,120 | 99,091 | 1,027 | 81,877 | 2,341 | 42,058 | 5,654 | 83,527 | 6,881 | 41,564 | 15,903 | 249,026 |

NA Not available.
1/ Because of space limitations column headings are abbreviated as follows: Ct = count; Men = Average number of men working daily.
2/ Data for metal 1950-53 includes nonmetal mine data; cannot be separated by detailed work location. However, summary total data are separable as presented.
3/ Clay mine data first compiled in 1955.
4/ Nonmetal mill data (exluding clay mills) first compiled in 1955; clay mill data first compiled in 1956.

TABLE 27. - Fatal and nonfatal disabling injuries and man-hours for metal, nonmetal, stone, and sand and gravel mines and mills combined with summarized data and injury-frequency rates, 195 -77

| Year | Metal | | | Nonmetal 1/ | | | Stone | | | Sand and gravel | | | Total injuries | | Total Man-hours | Frequency rates per million man-hours | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | | Fatal | Nonfatal |
| 1950---- | 91 | 7,396 | 182,579,681 | 19 | 1,238 | 28,455,936 | 54 | 4,762 | 189,534,811 | NA | NA | NA | 164 | 13,396 | 400,570,428 | 0.41 | 33.44 |
| 1951---- | 101 | 7,602 | 198,396,308 | 17 | 1,351 | 30,130,424 | 57 | 4,945 | 191,113,194 | NA | NA | NA | 175 | 13,898 | 419,839,926 | .42 | 33.10 |
| 1952---- | 121 | 7,536 | 200,018,566 | 14 | 1,171 | 28,954,402 | 74 | 4,503 | 186,551,830 | NA | NA | NA | 209 | 13,210 | 415,524,798 | .50 | 31.79 |
| 1953---- | 96 | 6,990 | 203,417,937 | 22 | 1,419 | 30,488,130 | 43 | 4,450 | 189,776,589 | NA | NA | NA | 161 | 12,859 | 423,682,656 | .38 | 30.35 |
| 1954---- | 96 | 5,824 | 172,609,435 | 9 | 956 | 29,563,983 | 34 | 3,834 | 175,817,150 | NA | NA | NA | 139 | 10,614 | 377,990,568 | .37 | 28.08 |
| 1955---- | 82 | 6,632 | 176,786,952 | 22 | 1,607 | 50,935,628 | 53 | 3,811 | 175,775,452 | NA | NA | NA | 157 | 12,050 | 403,498,032 | .39 | 29.86 |
| 1956---- | 98 | 6,154 | 189,846,456 | 24 | 2,193 | 74,638,783 | 50 | 3,754 | 178,280,989 | NA | NA | NA | 172 | 12,101 | 442,766,228 | .39 | 27.33 |
| 1957---- | 80 | 5,297 | 191,975,997 | 19 | 2,624 | 97,642,106 | 53 | 4,210 | 183,393,721 | NA | NA | NA | 152 | 12,131 | 473,011,824 | .32 | 25.65 |
| 1958---- | 73 | 3,966 | 151,321,546 | 24 | 2,445 | 105,809,183 | 45 | 4,572 | 186,821,185 | 25 | 1,698 | 92,455,928 | 167 | 12,681 | 536,408,042 | .31 | 23.64 |
| 1959---- | 78 | 3,634 | 139,197,177 | 22 | 3,228 | 127,039,494 | 52 | 4,790 | 199,321,231 | 21 | 2,161 | 109,829,947 | 173 | 13,813 | 575,387,849 | .30 | 24.01 |
| 1960---- | 89 | 4,282 | 173,291,189 | 32 | 2,850 | 123,190,919 | 39 | 4,668 | 202,365,853 | 25 | 1,919 | 95,749,128 | 185 | 13,719 | 594,597,089 | .31 | 23.07 |
| 1961---- | 53 | 4,127 | 157,230,182 | 21 | 2,541 | 119,441,616 | 32 | 4,280 | 192,705,110 | 21 | 1,814 | 101,706,650 | 127 | 12,762 | 571,083,558 | .22 | 22.35 |
| 1962---- | 75 | 3,745 | 153,030,068 | 23 | 2,327 | 107,104,694 | 67 | 3,299 | 193,453,116 | 51 | 2,093 | 97,589,447 | 216 | 11,464 | 551,177,325 | .39 | 20.80 |
| 1963---- | 46 | 3,485 | 140,984,549 | 33 | 2,333 | 108,483,375 | 61 | 3,468 | 193,684,722 | 33 | 1,894 | 95,785,817 | 173 | 11,180 | 538,938,463 | .32 | 20.74 |
| 1964---- | 60 | 3,672 | 149,446,793 | 24 | 2,486 | 107,437,869 | 61 | 3,367 | 188,000,120 | 34 | 1,957 | 100,891,462 | 179 | 11,482 | 545,776,244 | .33 | 21.04 |
| 1965---- | 61 | 3,764 | 160,933,954 | 31 | 2,472 | 108,735,036 | 48 | 3,305 | 193,999,994 | 40 | 1,870 | 100,082,962 | 180 | 11,411 | 563,751,946 | .32 | 20.24 |
| 1966---- | 82 | 4,010 | 162,906,615 | 27 | 2,622 | 113,813,660 | 51 | 3,583 | 190,787,493 | 35 | 2,098 | 104,971,239 | 195 | 12,313 | 572,479,007 | .34 | 21.51 |
| 1967---- | 73 | 3,468 | 142,744,284 | 30 | 2,551 | 107,399,738 | 46 | 3,267 | 186,226,587 | 32 | 1,919 | 96,645,422 | 181 | 11,205 | 533,016,031 | .34 | 21.02 |
| 1968---- | 59 | 3,375 | 148,875,044 | 39 | 2,472 | 99,413,910 | 58 | 3,260 | 186,620,158 | 26 | 1,992 | 93,155,512 | 182 | 11,099 | 528,064,624 | .34 | 21.02 |
| 1969---- | 68 | 3,731 | 158,773,372 | 27 | 2,361 | 98,798,717 | 51 | 3,389 | 187,003,122 | 31 | 1,929 | 94,223,319 | 179 | 11,410 | 538,798,530 | .33 | 21.18 |
| 1970---- | 65 | 4,243 | 165,090,939 | 28 | 2,394 | 94,706,700 | 43 | 3,666 | 184,225,117 | 29 | 2,045 | 95,066,530 | 165 | 12,348 | 539,089,286 | .31 | 22.91 |
| 1971---- | 56 | 3,815 | 153,145,622 | 24 | 2,308 | 84,277,963 | 58 | 3,893 | 184,615,166 | 26 | 2,132 | 94,786,459 | 164 | 12,148 | 517,025,210 | .32 | 23.50 |
| 1972---- | 135 | 3,271 | 140,176,824 | 17 | 1,969 | 72,685,546 | 46 | 2,992 | 143,926,672 | 36 | 1,364 | 57,113,857 | 234 | 9,596 | 413,902,899 | .57 | 23.18 |
| 1973---- | 52 | 3,512 | 143,688,420 | 23 | 1,436 | 70,851,282 | 60 | 2,436 | 130,301,978 | 40 | 867 | 51,759,816 | 175 | 8,251 | 396,601,496 | .44 | 20.80 |
| 1974---- | 52 | 3,909 | 153,336,645 | 19 | 1,468 | 75,015,349 | 48 | 2,613 | 136,707,215 | 39 | 910 | 54,799,807 | 158 | 8,900 | 419,859,016 | .38 | 21.20 |
| 1975---- | 41 | 3,568 | 153,907,983 | 25 | 1,524 | 77,778,593 | 36 | 2,526 | 130,274,910 | 21 | 803 | 57,412,846 | 123 | 8,421 | 419,374,332 | .29 | 20.08 |
| 1976---- | 34 | 3,344 | 159,598,276 | 22 | 1,507 | 77,942,903 | 33 | 2,079 | 149,867,834 | 24 | 755 | 56,550,794 | 113 | 8,485 | 443,959,807 | .25 | 19.11 |
| 1977---- | 52 | 3,087 | 149,260,803 | 16 | 1,539 | 81,456,531 | 39 | 3,248 | 155,844,538 | 26 | 784 | 60,533,293 | 133 | 8,658 | 447,095,165 | .30 | 19.37 |

NA Not available.
1/ Clay mine data first compiled in 1955, mill data in 1956.

TABLE 28. - Fatal and nonfatal disabling injuries and man-hours for all mining activities combined at metal, nonmetal, stone, and sand and gravel mines with summarized data and injury-frequency rates, 1950-77

| Year | Metal | | | Nonmetal 1/ | | | Stone | | | Sand and gravel | | | Total injuries | | Total Man-hours | Frequency rates per million man-hours | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | | Fatal | Nonfatal |
| 1950---- | 84 | 6,611 | 147,764,681 | 19 | 1,238 | 28,455,936 | 31 | 2,764 | 76,632,185 | NA | NA | NA | 134 | 10,613 | 252,852,802 | 0.53 | 41.97 |
| 1951---- | 95 | 6,824 | 159,417,308 | 17 | 1,351 | 30,130,424 | 33 | 2,857 | 76,526,832 | NA | NA | NA | 145 | 11,032 | 266,074,564 | .54 | 41.46 |
| 1952---- | 117 | 6,684 | 158,648,566 | 14 | 1,171 | 28,954,402 | 49 | 2,626 | 76,062,914 | NA | NA | NA | 180 | 10,481 | 263,665,882 | .68 | 39.75 |
| 1953---- | 92 | 6,164 | 156,604,937 | 22 | 1,419 | 30,488,130 | 24 | 2,693 | 78,329,135 | NA | NA | NA | 138 | 10,276 | 265,422,202 | .52 | 38.72 |
| 1954---- | 80 | 4,994 | 130,488,488 | 9 | 956 | 29,563,983 | 25 | 2,520 | 69,691,034 | NA | NA | NA | 120 | 8,470 | 229,743,505 | .52 | 36.87 |
| 1955---- | 79 | 5,837 | 136,930,227 | 19 | 1,136 | 31,092,628 | 35 | 2,535 | 67,698,116 | NA | NA | NA | 133 | 9,528 | 235,740,971 | .56 | 40.42 |
| 1956---- | 89 | 5,475 | 144,406,908 | 17 | 1,036 | 33,963,466 | 35 | 2,470 | 69,980,673 | NA | NA | NA | 141 | 8,981 | 248,351,047 | .57 | 36.16 |
| 1957---- | 71 | 4,554 | 142,180,525 | 9 | 1,112 | 37,877,405 | 31 | 2,905 | 73,135,571 | NA | NA | NA | 111 | 8,571 | 253,193,501 | .44 | 33.85 |
| 1958---- | 70 | 3,499 | 109,522,837 | 15 | 955 | 34,647,823 | 26 | 2,575 | 69,985,908 | 25 | 1,698 | 92,455,928 | 136 | 8,727 | 306,612,496 | .44 | 28.46 |
| 1959---- | 73 | 3,281 | 100,575,864 | 11 | 1,072 | 36,333,831 | 30 | 2,486 | 75,291,573 | 21 | 2,161 | 109,829,947 | 135 | 9,000 | 322,031,215 | .42 | 27.95 |
| 1960---- | 84 | 3,794 | 119,653,014 | 19 | 1,056 | 36,804,625 | 20 | 2,432 | 72,071,020 | 25 | 1,919 | 95,749,128 | 148 | 9,201 | 324,277,786 | .46 | 28.37 |
| 1961---- | 50 | 3,669 | 107,677,734 | 15 | 861 | 35,516,829 | 20 | 2,251 | 69,313,994 | 21 | 1,814 | 101,706,650 | 106 | 8,595 | 314,215,207 | .34 | 27.35 |
| 1962---- | 61 | 3,261 | 103,866,895 | 14 | 944 | 32,484,103 | 38 | 1,619 | 69,747,619 | 51 | 2,093 | 97,589,447 | 164 | 7,919 | 303,688,064 | .54 | 26.08 |
| 1963---- | 41 | 3,075 | 97,111,407 | 31 | 857 | 32,538,995 | 36 | 1,644 | 71,026,185 | 33 | 1,894 | 95,785,817 | 141 | 7,470 | 296,462,404 | .48 | 25.20 |
| 1964---- | 55 | 3,266 | 104,203,799 | 18 | 906 | 35,976,745 | 39 | 1,695 | 71,807,951 | 34 | 1,957 | 100,891,462 | 146 | 7,824 | 312,879,957 | .47 | 25.01 |
| 1965---- | 58 | 3,292 | 112,277,274 | 21 | 989 | 37,760,116 | 26 | 1,584 | 78,061,954 | 40 | 1,870 | 100,082,962 | 145 | 7,735 | 328,182,306 | .44 | 23.57 |
| 1966---- | 75 | 3,435 | 111,856,761 | 16 | 1,058 | 41,003,446 | 31 | 1,734 | 73,670,909 | 35 | 2,098 | 104,971,239 | 157 | 8,325 | 331,502,355 | .47 | 25.11 |
| 1967---- | 66 | 2,881 | 95,793,746 | 17 | 1,026 | 38,549,899 | 25 | 1,506 | 72,905,263 | 32 | 1,919 | 96,645,422 | 140 | 7,332 | 303,894,330 | .46 | 24.13 |
| 1968---- | 57 | 2,836 | 98,692,976 | 36 | 953 | 35,633,052 | 36 | 1,540 | 73,842,763 | 26 | 1,992 | 93,155,512 | 155 | 7,321 | 301,324,303 | .51 | 24.30 |
| 1969---- | 62 | 3,111 | 103,972,952 | 17 | 880 | 35,147,354 | 40 | 1,509 | 73,844,133 | 31 | 1,929 | 94,223,319 | 150 | 7,429 | 307,187,758 | .49 | 24.18 |
| 1970---- | 57 | 3,521 | 107,793,799 | 18 | 799 | 32,413,652 | 29 | 1,765 | 72,802,956 | 29 | 2,045 | 95,066,530 | 133 | 8,130 | 308,076,937 | .43 | 26.39 |
| 1971---- | 47 | 3,214 | 107,512,011 | 15 | 741 | 28,554,934 | 37 | 1,784 | 72,111,218 | 26 | 2,132 | 94,786,459 | 125 | 7,871 | 297,964,622 | .42 | 26.42 |
| 1972---- | 130 | 2,766 | 94,882,425 | 10 | 621 | 25,352,520 | 23 | 1,084 | 51,895,935 | 36 | 1,364 | 57,113,857 | 199 | 5,835 | 229,244,737 | .87 | 25.45 |
| 1973---- | 47 | 3,100 | 96,466,811 | 16 | 806 | 29,061,338 | 41 | 1,720 | 69,458,627 | 40 | 867 | 51,759,816 | 144 | 6,493 | 246,746,592 | .58 | 26.31 |
| 1974---- | 48 | 3,439 | 103,380,528 | 14 | 869 | 31,786,993 | 34 | 1,792 | 73,021,120 | 39 | 910 | 54,799,807 | 135 | 7,010 | 262,988,448 | .51 | 26.66 |
| 1975---- | 39 | 2,964 | 101,052,111 | 13 | 858 | 35,437,191 | 30 | 1,779 | 71,093,737 | 21 | 803 | 57,412,846 | 103 | 6,404 | 264,995,885 | .39 | 24.17 |
| 1976---- | 32 | 2,627 | 99,936,995 | 14 | 666 | 31,235,751 | 19 | 1,644 | 66,757,926 | 24 | 755 | 56,550,794 | 89 | 5,692 | 254,481,466 | .35 | 22.37 |
| 1977---- | 44 | 2,456 | 94,929,006 | 10 | 621 | 31,999,977 | 21 | 1,625 | 68,117,697 | 26 | 784 | 60,533,293 | 101 | 5,486 | 255,579,973 | .40 | 21.46 |

NA Not available.
1/ Clay mine data first compiled in 1955.

TABLE 29. - Fatal and nonfatal disabling injuries and man-hours for combined underground and associated surface workings at metal, nonmetal, and stone mines with summarized data and injury-frequency rates, 1950-77

| | Metal 1/ | | | Nonmetal 2/ | | | Stone | | | Sand and gravel | | | Total injuries | | Total Man-hours | Frequency rates per million man-hours | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | | Fatal | Nonfatal |
| 1950---- | 87 | 7,067 | 127,916,805 | NA | NA | NA | 3 | 255 | 8,785,200 | | | | 90 | 7,322 | 136,702,005 | 0.66 | 53.56 |
| 1951---- | 94 | 7,510 | 134,694,856 | NA | NA | NA | 7 | 302 | 9,154,767 | | | | 101 | 7,814 | 143,849,623 | .70 | 52.24 |
| 1952---- | 115 | 6,962 | 133,894,310 | NA | NA | NA | 8 | 246 | 9,196,045 | | | | 123 | 7,208 | 143,090,355 | .86 | 50.37 |
| 1953---- | 98 | 6,669 | 128,911,659 | NA | NA | NA | 2 | 223 | 9,195,403 | | | | 100 | 6,892 | 138,107,062 | .72 | 49.90 |
| 1954---- | 69 | 4,539 | 93,683,143 | 5 | 753 | 19,194,599 | 2 | 175 | 6,624,630 | | | | 76 | 5,467 | 119,502,372 | .64 | 45.75 |
| 1955---- | 69 | 5,281 | 97,399,080 | 11 | 803 | 19,665,350 | 2 | 193 | 7,379,530 | | | | 82 | 6,277 | 124,443,960 | .66 | 50.44 |
| 1956---- | 81 | 4,975 | 99,207,899 | 6 | 753 | 20,142,826 | 2 | 236 | 7,747,807 | | | | 89 | 5,964 | 127,098,532 | .70 | 46.92 |
| 1957---- | 61 | 4,183 | 98,414,294 | 6 | 823 | 23,455,840 | 2 | 168 | 7,266,084 | | | | 69 | 5,174 | 129,136,218 | .53 | 40.07 |
| 1958---- | 63 | 3,021 | 73,349,127 | 9 | 531 | 12,200,781 | 3 | 162 | 5,293,283 | | | | 75 | 3,714 | 90,843,191 | .83 | 40.88 |
| 1959---- | 64 | 2,858 | 67,195,360 | 3 | 583 | 13,569,290 | 1 | 172 | 6,069,792 | | | | 68 | 3,613 | 87,034,442 | .78 | 41.51 |
| 1960---- | 69 | 3,261 | 71,827,320 | 8 | 596 | 12,790,779 | 1 | 214 | 5,637,970 | | | | 78 | 4,071 | 90,256,069 | .86 | 45.10 |
| 1961---- | 42 | 3,254 | 69,561,828 | 8 | 458 | 12,417,720 | 2 | 150 | 5,272,425 | | | | 52 | 3,862 | 87,251,973 | .60 | 44.26 |
| 1962---- | 51 | 2,891 | 65,324,213 | 9 | 524 | 12,289,296 | 5 | 193 | 5,679,747 | | | | 65 | 3,608 | 83,293,256 | .78 | 43.32 |
| 1963---- | 33 | 2,749 | 60,254,831 | 29 | 507 | 12,789,340 | 3 | 149 | 5,937,303 | | | | 65 | 3,405 | 78,981,474 | .82 | 43.11 |
| 1964---- | 45 | 2,904 | 65,491,015 | 8 | 520 | 13,699,465 | 3 | 159 | 5,860,232 | | | | 56 | 3,583 | 85,050,712 | .66 | 42.13 |
| 1965---- | 46 | 2,883 | 67,255,143 | 12 | 541 | 13,802,546 | 4 | 145 | 6,696,436 | | | | 62 | 3,569 | 87,754,125 | .71 | 40.67 |
| 1966---- | 65 | 2,905 | 66,560,632 | 10 | 507 | 13,523,020 | 7 | 196 | 6,443,232 | | | | 82 | 3,608 | 86,526,884 | .95 | 41.70 |
| 1967---- | 54 | 2,391 | 56,095,290 | 6 | 557 | 12,952,093 | 5 | 159 | 6,228,164 | | | | 65 | 3,107 | 75,275,547 | .86 | 41.28 |
| 1968---- | 37 | 2,299 | 55,315,845 | 32 | 566 | 11,873,223 | 6 | 139 | 6,073,715 | | | | 75 | 3,004 | 73,262,783 | 1.02 | 41.00 |
| 1969---- | 46 | 2,549 | 56,975,285 | 10 | 407 | 11,028,261 | 8 | 160 | 5,913,499 | | | | 64 | 3,116 | 73,917,045 | .87 | 42.16 |
| 1970---- | 44 | 2,889 | 57,546,296 | 13 | 442 | 11,449,019 | 3 | 124 | 6,060,045 | | | | 60 | 3,455 | 75,055,360 | .80 | 46.03 |
| 1971---- | 37 | 2,746 | 53,560,813 | 12 | 444 | 11,309,406 | 7 | 191 | 5,553,765 | | | | 56 | 3,381 | 70,423,984 | .80 | 48.01 |
| 1972---- | 125 | 2,311 | 48,510,556 | 7 | 353 | 10,637,489 | 2 | 98 | 4,622,064 | | | | 134 | 2,762 | 63,770,669 | 2.10 | 43.31 |
| 1973---- | 39 | 2,458 | 44,401,186 | 7 | 333 | 10,939,994 | 3 | 169 | 4,806,764 | | | | 49 | 2,960 | 60,147,944 | .81 | 49.21 |
| 1974---- | 36 | 2,651 | 48,992,817 | 10 | 391 | 11,971,572 | 4 | 209 | 5,455,705 | | | | 50 | 3,241 | 66,420,094 | .75 | 48.80 |
| 1975---- | 30 | 2,344 | 50,619,510 | 10 | 396 | 13,059,710 | 3 | 181 | 5,172,400 | | | | 43 | 2,921 | 68,851,620 | .62 | 42.42 |
| 1976---- | 26 | 2,069 | 48,034,681 | 9 | 339 | 11,936,322 | 2 | 154 | 4,522,965 | | | | 37 | 2,562 | 64,493,968 | .57 | 39.72 |
| 1977---- | 37 | 1,937 | 47,568,058 | 3 | 327 | 12,113,568 | 2 | 153 | 4,508,589 | | | | 42 | 2,417 | 64,190,215 | .65 | 37.65 |

NA Not available.
1/ Data for 1950-53 includes nonmetal mine data; cannot be separated by detailed work location.
2/ Mine data 1950-53, included with metal data. Clay mine data first compiled in 1955.

TABLE 30. - Fatal and nonfatal disabling injuries and man-hours for underground workings at metal, nonmetal, and stone mines with summarized data and injury-frequency rates, 1950-77

| Year | Metal 1/ | | | Nonmetal 2/ | | | Stone | | | Sand and gravel | | | Total injuries | | Total Man-hours | Frequency rates per million man-hours | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | | Fatal | Nonfatal |
| 1950---- | 85 | 6,046 | 86,565,534 | NA | NA | NA | 3 | 255 | 8,785,200 | | | | 88 | 6,301 | 95,350,734 | 0.92 | 66.08 |
| 1951---- | 84 | 5,987 | 91,198,993 | NA | NA | NA | 7 | 302 | 9,154,767 | | | | 91 | 6,289 | 100,353,760 | .91 | 62.67 |
| 1952---- | 111 | 5,936 | 92,850,458 | NA | NA | NA | 7 | 207 | 7,534,003 | | | | 118 | 6,143 | 100,384,461 | 1.18 | 61.19 |
| 1953---- | 93 | 5,548 | 88,890,484 | NA | NA | NA | 2 | 201 | 7,337,933 | | | | 95 | 5,749 | 96,228,417 | .99 | 59.74 |
| 1954---- | 67 | 4,138 | 68,839,907 | 5 | 490 | 9,717,156 | 2 | 156 | 5,590,118 | | | | 74 | 4,784 | 84,147,181 | .88 | 56.85 |
| 1955---- | 62 | 4,687 | 73,077,766 | 9 | 624 | 11,648,476 | 2 | 142 | 5,847,627 | | | | 73 | 5,453 | 90,573,869 | .81 | 60.21 |
| 1956---- | 74 | 4,370 | 75,857,117 | 4 | 506 | 10,703,947 | 1 | 186 | 6,136,672 | | | | 79 | 5,062 | 92,697,736 | .85 | 54.61 |
| 1957---- | 56 | 3,667 | 72,796,487 | 5 | 593 | 11,462,155 | 2 | 136 | 5,913,743 | | | | 63 | 4,396 | 90,172,385 | .70 | 48.75 |
| 1958---- | 55 | 2,699 | 54,758,431 | 8 | 424 | 9,839,908 | 3 | 162 | 5,293,283 | | | | 66 | 3,285 | 69,891,622 | .94 | 47.00 |
| 1959---- | 58 | 2,591 | 50,743,047 | 2 | 495 | 11,008,202 | 1 | 172 | 6,069,792 | | | | 61 | 3,258 | 67,821,041 | .90 | 48.04 |
| 1960---- | 65 | 2,981 | 56,855,911 | 8 | 470 | 9,906,029 | 1 | 214 | 5,637,970 | | | | 74 | 3,665 | 72,399,910 | 1.02 | 50.62 |
| 1961---- | 39 | 2,997 | 54,300,040 | 7 | 403 | 9,426,425 | 2 | 150 | 5,272,425 | | | | 48 | 3,550 | 68,998,890 | .70 | 51.45 |
| 1962---- | 46 | 2,595 | 50,678,641 | 9 | 423 | 9,363,359 | 5 | 152 | 4,675,121 | | | | 60 | 3,170 | 64,717,121 | .93 | 48.98 |
| 1963---- | 32 | 2,506 | 47,158,555 | 29 | 426 | 9,728,737 | 3 | 139 | 4,954,960 | | | | 64 | 3,071 | 61,842,252 | 1.03 | 49.66 |
| 1964---- | 40 | 2,658 | 50,514,561 | 7 | 450 | 9,892,832 | 2 | 141 | 4,546,763 | | | | 49 | 3,249 | 64,954,156 | .75 | 50.02 |
| 1965---- | 46 | 2,707 | 51,897,888 | 11 | 490 | 10,529,702 | 4 | 126 | 5,111,681 | | | | 61 | 3,323 | 67,539,271 | .90 | 49.20 |
| 1966---- | 63 | 2,661 | 51,929,717 | 10 | 454 | 10,084,876 | 4 | 154 | 4,823,384 | | | | 77 | 3,269 | 66,837,977 | 1.15 | 48.91 |
| 1967---- | 51 | 2,197 | 42,225,537 | 6 | 499 | 9,911,127 | 4 | 135 | 4,753,860 | | | | 61 | 2,831 | 56,890,524 | 1.07 | 49.76 |
| 1968---- | 33 | 2,118 | 42,059,259 | 29 | 496 | 9,087,766 | 6 | 116 | 4,603,671 | | | | 68 | 2,730 | 55,750,696 | 1.22 | 48.97 |
| 1969---- | 43 | 2,357 | 43,526,876 | 9 | 322 | 8,382,542 | 5 | 127 | 4,621,928 | | | | 57 | 2,806 | 56,531,346 | 1.01 | 49.64 |
| 1970---- | 43 | 2,663 | 44,874,014 | 12 | 371 | 8,600,529 | 1 | 86 | 4,698,115 | | | | 56 | 3,120 | 58,172,658 | .96 | 53.63 |
| 1971---- | 37 | 2,531 | 41,020,215 | 12 | 381 | 8,630,222 | 6 | 130 | 4,289,173 | | | | 55 | 3,042 | 53,939,610 | 1.02 | 56.40 |
| 1972---- | 125 | 2,088 | 37,270,551 | 7 | 309 | 7,971,307 | 2 | 70 | 3,448,556 | | | | 134 | 2,467 | 48,690,414 | 2.75 | 50.67 |
| 1973---- | 37 | 2,218 | 35,551,614 | 6 | 296 | 8,994,810 | 3 | 156 | 3,851,666 | | | | 46 | 2,670 | 48,398,090 | .95 | 55.17 |
| 1974---- | 34 | 2,446 | 39,762,407 | 9 | 358 | 9,910,055 | 4 | 199 | 4,284,874 | | | | 47 | 3,003 | 53,957,336 | .87 | 55.66 |
| 1975---- | 25 | 2,215 | 40,218,161 | 3 | 358 | 10,768,031 | 3 | 151 | 4,001,496 | | | | 31 | 2,724 | 54,987,688 | .56 | 49.54 |
| 1976---- | 24 | 1,930 | 38,094,571 | 9 | 319 | 10,551,967 | 2 | 128 | 3,613,755 | | | | 35 | 2,377 | 52,260,293 | .67 | 45.48 |
| 1977---- | 35 | 1,783 | 38,808,515 | 3 | 300 | 10,679,190 | 2 | 127 | 3,667,249 | | | | 40 | 2,210 | 53,154,954 | .75 | 41.58 |

NA Not available.
1/ Data for 1950-53 includes nonmetal mine data; cannot be separated by detailed work location.
2/ Mine data 1950-53, included with metal data. Clay mine data first compiled in 1955.

TABLE 31. - Fatal and nonfatal disabling injuries and man-hours for associated surface workings at underground metal, nonmetal and stone mines with summarized data and injury-frequency rates, 1950-77

| Year | Metal 1/ | | | Nonmetal 2/ | | | Stone | | | Sand and gravel | | | Total injuries | | Total Man-hours | Frequency rates per million man-hours | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | | Fatal | Nonfatal |
| 1950---- | 2 | 1,021 | 41,351,271 | NA | NA | NA | - | - | - | | | | 2 | 1,021 | 41,351,271 | 0.05 | 24.69 |
| 1951---- | 10 | 1,225 | 43,495,863 | NA | NA | NA | - | - | - | | | | 10 | 1,225 | 43,495,863 | .23 | 28.16 |
| 1952---- | 4 | 1,026 | 41,043,852 | NA | NA | NA | 1 | 39 | 1,662,042 | | | | 5 | 1,065 | 42,705,894 | .12 | 24.94 |
| 1953---- | 5 | 1,121 | 40,021,175 | NA | NA | NA | - | 22 | 1,857,470 | | | | 5 | 1,143 | 41,878,645 | .12 | 27.29 |
| 1954---- | 2 | 401 | 24,843,236 | - | 263 | 9,477,443 | - | 19 | 1,034,512 | | | | 2 | 683 | 35,355,191 | .06 | 19.32 |
| 1955---- | 7 | 594 | 24,321,314 | 2 | 179 | 8,016,874 | - | 51 | 1,531,903 | | | | 9 | 824 | 33,870,091 | .27 | 24.33 |
| 1956---- | 7 | 605 | 23,350,782 | 2 | 247 | 9,438,879 | 1 | 50 | 1,611,135 | | | | 10 | 902 | 34,400,796 | .29 | 26.22 |
| 1957---- | 5 | 516 | 25,617,807 | 1 | 230 | 11,993,685 | - | 32 | 1,352,341 | | | | 6 | 778 | 38,963,833 | .15 | 19.97 |
| 1958---- | 8 | 322 | 18,590,696 | 1 | 107 | 2,360,873 | - | - | - | | | | 9 | 429 | 20,951,569 | .43 | 20.48 |
| 1959---- | 6 | 267 | 16,652,313 | 1 | 88 | 2,561,088 | - | - | - | | | | 7 | 355 | 19,213,401 | .36 | 18.48 |
| 1960---- | 4 | 280 | 14,971,409 | - | 126 | 2,884,750 | - | - | - | | | | 4 | 406 | 17,856,159 | .22 | 22.74 |
| 1961---- | 3 | 257 | 15,261,788 | 1 | 55 | 2,991,295 | - | - | - | | | | 4 | 312 | 18,253,083 | .22 | 17.09 |
| 1962---- | 5 | 296 | 14,645,572 | - | 101 | 2,925,937 | - | 41 | 1,004,626 | | | | 5 | 438 | 18,576,135 | .27 | 23.58 |
| 1963---- | 1 | 243 | 13,096,276 | - | 81 | 3,060,603 | - | 10 | 982,343 | | | | 1 | 334 | 17,139,222 | .06 | 19.49 |
| 1964---- | 5 | 246 | 14,976,454 | 1 | 70 | 3,806,633 | 1 | 18 | 1,313,469 | | | | 7 | 334 | 20,096,556 | .35 | 16.62 |
| 1965---- | - | 176 | 15,357,255 | 1 | 51 | 3,272,844 | - | 19 | 1,584,755 | | | | 1 | 246 | 20,214,854 | .05 | 12.17 |
| 1966---- | 2 | 244 | 14,630,915 | - | 53 | 3,438,144 | 3 | 42 | 1,619,848 | | | | 5 | 339 | 19,688,907 | .25 | 17.22 |
| 1967---- | 3 | 194 | 13,869,753 | - | 58 | 3,040,966 | 1 | 24 | 1,474,304 | | | | 4 | 276 | 18,385,023 | .22 | 15.01 |
| 1968---- | 4 | 181 | 13,256,586 | 3 | 70 | 2,785,457 | - | 23 | 1,470,044 | | | | 7 | 274 | 17,512,087 | .40 | 15.65 |
| 1969---- | 3 | 192 | 13,448,409 | 1 | 85 | 2,645,719 | 3 | 33 | 1,291,571 | | | | 7 | 310 | 17,385,699 | .40 | 17.83 |
| 1970---- | 1 | 226 | 12,672,282 | 1 | 71 | 2,848,490 | 2 | 38 | 1,361,930 | | | | 4 | 335 | 16,882,702 | .24 | 19.84 |
| 1971---- | - | 215 | 12,540,598 | - | 63 | 2,679,184 | 1 | 61 | 1,264,592 | | | | 1 | 339 | 16,484,374 | .06 | 20.56 |
| 1972---- | - | 223 | 11,240,005 | - | 44 | 2,666,682 | - | 28 | 1,173,508 | | | | - | 295 | 15,080,195 | - | 19.56 |
| 1973---- | 2 | 240 | 8,849,572 | 1 | 37 | 1,945,184 | - | 13 | 955,098 | | | | 3 | 290 | 11,749,854 | .26 | 24.68 |
| 1974---- | 2 | 205 | 9,230,410 | 1 | 23 | 2,061,517 | - | 10 | 1,170,831 | | | | 3 | 238 | 12,462,758 | .24 | 19.10 |
| 1975---- | 5 | 129 | 10,401,349 | 7 | 38 | 2,291,679 | - | 30 | 1,170,904 | | | | 12 | 197 | 13,863,932 | .87 | 14.21 |
| 1976---- | 2 | 139 | 9,940,110 | - | 20 | 1,384,355 | - | 26 | 909,210 | | | | 2 | 185 | 12,233,675 | .16 | 15.12 |
| 1977---- | 2 | 154 | 8,759,543 | - | 27 | 1,436,378 | - | 26 | 841,340 | | | | 2 | 207 | 11,035,261 | .18 | 18.76 |

NA Not available.
1/ Data for 1950-53 includes nonmetal mine data; cannot be separated by detailed work location.
2/ Mine data 1950-53, included with metal data. Clay mine data first compiled in 1955.

TABLE 32. - Fatal and nonfatal disabling injuries and man-hours for open pit and other surface workings at metal, nonmetal, stone, and sand and gravel mines with summarized data and injury-frequency rates, 1950-77

| Year | Metal 1/ | | | Nonmetal 2/ | | | Stone | | | Sand and gravel | | | Total injuries | | Total man-hours | Frequency rates per million man-hours | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | | Fatal | Nonfatal |
| 1950---- | 16 | 782 | 48,303,812 | NA | NA | NA | 28 | 2,509 | 67,846,985 | NA | NA | NA | 44 | 3,291 | 116,150,797 | 0.38 | 28.33 |
| 1951---- | 18 | 963 | 54,852,876 | NA | NA | NA | 26 | 2,555 | 67,372,065 | NA | NA | NA | 44 | 3,518 | 122,224,941 | .36 | 28.78 |
| 1952---- | 16 | 893 | 53,708,658 | NA | NA | NA | 41 | 2,380 | 66,866,869 | NA | NA | NA | 57 | 3,273 | 120,575,527 | .47 | 27.14 |
| 1953---- | 16 | 914 | 58,181,408 | NA | NA | NA | 22 | 2,470 | 69,133,732 | NA | NA | NA | 38 | 3,384 | 127,315,140 | .30 | 26.58 |
| 1954---- | 17 | 455 | 36,805,345 | 4 | 203 | 10,369,384 | 23 | 2,345 | 61,066,404 | NA | NA | NA | 44 | 3,003 | 110,241,133 | .40 | 27.24 |
| 1955---- | 10 | 556 | 39,551,147 | 8 | 353 | 11,427,278 | 33 | 2,342 | 60,318,586 | NA | NA | NA | 51 | 3,251 | 111,297,011 | .46 | 29.21 |
| 1956---- | 8 | 500 | 45,199,009 | 11 | 283 | 13,820,640 | 33 | 2,234 | 62,232,866 | NA | NA | NA | 52 | 3,017 | 121,252,515 | .43 | 24.88 |
| 1957---- | 10 | 471 | 43,766,231 | 3 | 289 | 14,421,565 | 29 | 2,737 | 65,869,487 | NA | NA | NA | 42 | 3,397 | 124,057,283 | .34 | 27.38 |
| 1958---- | 7 | 478 | 36,173,710 | 6 | 424 | 22,447,042 | 23 | 2,413 | 64,692,625 | 25 | 1,698 | 92,455,928 | 61 | 5,013 | 215,769,305 | .28 | 23.23 |
| 1959---- | 9 | 423 | 33,180,304 | 8 | 489 | 22,764,541 | 29 | 2,314 | 69,221,781 | 21 | 2,161 | 109,829,947 | 67 | 5,387 | 234,996,773 | .29 | 22.92 |
| 1960---- | 15 | 533 | 47,825,693 | 11 | 460 | 24,013,846 | 19 | 2,218 | 66,433,050 | 25 | 1,919 | 95,749,128 | 70 | 5,130 | 234,021,717 | .30 | 21.92 |
| 1961---- | 8 | 415 | 38,115,906 | 7 | 403 | 23,099,109 | 18 | 2,101 | 64,041,569 | 21 | 1,814 | 101,706,650 | 54 | 4,733 | 226,963,234 | .24 | 20.85 |
| 1962---- | 10 | 372 | 38,542,682 | 5 | 420 | 20,194,807 | 33 | 1,426 | 64,067,872 | 51 | 2,093 | 97,589,447 | 99 | 4,311 | 220,394,808 | .45 | 19.56 |
| 1963---- | 8 | 326 | 36,856,576 | 2 | 350 | 19,749,655 | 33 | 1,495 | 65,088,882 | 33 | 1,894 | 95,785,817 | 76 | 4,065 | 217,480,930 | .35 | 18.69 |
| 1964---- | 10 | 362 | 38,712,784 | 10 | 386 | 22,277,280 | 36 | 1,536 | 65,947,719 | 34 | 1,957 | 100,891,462 | 90 | 4,241 | 227,829,245 | .40 | 18.61 |
| 1965---- | 12 | 409 | 45,022,131 | 9 | 448 | 23,957,570 | 22 | 1,439 | 71,365,518 | 40 | 1,870 | 100,082,962 | 83 | 4,166 | 240,428,181 | .35 | 17.33 |
| 1966---- | 10 | 530 | 45,296,129 | 6 | 551 | 27,480,426 | 24 | 1,538 | 67,227,677 | 35 | 2,098 | 104,971,239 | 75 | 4,717 | 244,975,471 | .31 | 19.25 |
| 1967---- | 12 | 490 | 39,698,456 | 11 | 469 | 25,597,806 | 20 | 1,347 | 66,677,099 | 32 | 1,919 | 96,645,422 | 75 | 4,225 | 228,618,783 | .33 | 18.48 |
| 1968---- | 20 | 537 | 43,377,131 | 4 | 387 | 23,759,829 | 30 | 1,401 | 67,769,048 | 26 | 1,992 | 93,155,512 | 80 | 4,317 | 228,061,520 | .35 | 18.93 |
| 1969---- | 16 | 562 | 46,997,667 | 7 | 473 | 24,119,093 | 32 | 1,349 | 67,930,634 | 31 | 1,929 | 94,223,319 | 86 | 4,313 | 233,270,713 | .37 | 18.49 |
| 1970---- | 13 | 632 | 50,247,503 | 5 | 357 | 20,964,633 | 26 | 1,641 | 66,742,911 | 29 | 2,045 | 95,066,530 | 73 | 4,675 | 233,021,577 | .31 | 20.06 |
| 1971---- | 10 | 468 | 48,951,198 | 3 | 297 | 17,245,528 | 30 | 1,593 | 66,557,453 | 26 | 2,132 | 94,786,459 | 69 | 4,490 | 227,540,638 | .30 | 19.73 |
| 1972---- | 5 | 455 | 46,371,869 | 3 | 268 | 14,714,531 | 21 | 986 | 47,273,871 | 36 | 1,364 | 57,113,857 | 65 | 3,073 | 165,474,128 | .39 | 18.57 |
| 1973---- | 8 | 642 | 52,065,625 | 9 | 473 | 18,121,344 | 38 | 1,551 | 64,651,863 | 40 | 867 | 51,759,816 | 95 | 3,533 | 186,598,648 | .51 | 18.93 |
| 1974---- | 12 | 788 | 54,387,711 | 4 | 488 | 19,815,421 | 30 | 1,583 | 67,565,415 | 39 | 910 | 54,799,807 | 85 | 3,769 | 196,568,354 | .43 | 19.17 |
| 1975---- | 9 | 620 | 50,432,601 | 3 | 462 | 22,377,481 | 27 | 1,598 | 65,921,337 | 21 | 803 | 57,412,846 | 60 | 3,483 | 196,144,265 | .31 | 17.76 |
| 1976---- | 6 | 558 | 51,902,314 | 5 | 327 | 19,299,429 | 17 | 1,490 | 62,234,961 | 24 | 755 | 56,550,794 | 52 | 3,130 | 189,987,498 | .27 | 16.47 |
| 1977---- | 7 | 519 | 47,360,948 | 7 | 294 | 19,886,409 | 19 | 1,472 | 63,609,108 | 26 | 784 | 60,533,293 | 59 | 3,069 | 191,389,758 | .31 | 16.04 |

NA Not available.
1/ Data for 1950-53 includes nonmetal mine data; cannot be separated by detailed work location.
2/ Mine data 1950-53, included with metal data. Clay mine data first compiled in 1955.

TABLE 33. - Fatal and nonfatal disabling injuries and man-hours for metal, nonmetal, and stone mills with summarized data and frequency rates, 1950-77

| Year | Metal | | | Nonmetal 1/ | | | Stone | | | Sand and gravel 2/ | | | Total injuries | | Total man-hours | Frequency rates per million man-hours | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | Man-hours | Fatal | Nonfatal | | Fatal | Nonfatal |
| 1950---- | 7 | 785 | 34,815,000 | NA | NA | NA | 23 | 1,998 | 112,902,626 | | | | 30 | 2,783 | 147,717,626 | 0.20 | 18.84 |
| 1951---- | 6 | 778 | 39,179,000 | NA | NA | NA | 24 | 2,088 | 114,586,362 | | | | 30 | 2,866 | 153,765,362 | .20 | 18.64 |
| 1952---- | 4 | 852 | 41,370,000 | NA | NA | NA | 25 | 1,877 | 110,488,916 | | | | 29 | 2,729 | 151,858,916 | .19 | 17.97 |
| 1953---- | 4 | 826 | 46,813,000 | NA | NA | NA | 19 | 1,757 | 111,447,454 | | | | 23 | 2,583 | 158,260,454 | .15 | 16.32 |
| 1954---- | 10 | 830 | 42,120,947 | NA | NA | NA | 9 | 1,314 | 106,126,116 | | | | 19 | 2,144 | 148,247,063 | .13 | 14.46 |
| 1955---- | 3 | 795 | 39,836,725 | 3 | 451 | 19,843,000 | 18 | 1,276 | 108,077,336 | | | | 24 | 2,522 | 167,757,061 | .14 | 15.03 |
| 1956---- | 9 | 679 | 45,439,548 | 7 | 1,157 | 40,675,317 | 15 | 1,284 | 108,300,316 | | | | 31 | 3,120 | 194,415,181 | .16 | 16.05 |
| 1957---- | 9 | 743 | 49,795,472 | 10 | 1,512 | 59,764,701 | 22 | 1,305 | 110,258,150 | | | | 41 | 3,560 | 219,818,323 | .19 | 16.20 |
| 1958---- | 3 | 467 | 41,798,709 | 9 | 1,490 | 71,161,360 | 19 | 1,997 | 116,835,477 | | | | 31 | 3,954 | 229,795,546 | .13 | 17.21 |
| 1959---- | 5 | 353 | 38,621,313 | 11 | 2,156 | 90,705,663 | 22 | 2,304 | 124,029,658 | | | | 38 | 4,813 | 253,356,634 | .15 | 19.00 |
| 1960---- | 5 | 488 | 53,638,176 | 13 | 1,794 | 86,386,294 | 19 | 2,236 | 130,294,833 | | | | 37 | 4,518 | 270,319,303 | .14 | 16.71 |
| 1961---- | 3 | 458 | 49,552,448 | 6 | 1,680 | 83,924,787 | 12 | 2,029 | 123,391,116 | | | | 21 | 4,167 | 256,868,351 | .08 | 16.22 |
| 1962---- | 14 | 482 | 49,163,173 | 9 | 1,383 | 74,620,591 | 29 | 1,680 | 123,705,497 | | | | 52 | 3,545 | 247,489,261 | .21 | 14.32 |
| 1963---- | 5 | 410 | 43,873,142 | 2 | 1,476 | 75,944,380 | 25 | 1,824 | 122,658,537 | | | | 32 | 3,710 | 242,476,059 | .13 | 15.30 |
| 1964---- | 5 | 406 | 45,242,994 | 6 | 1,580 | 71,461,124 | 22 | 1,672 | 116,192,169 | | | | 33 | 3,658 | 232,896,287 | .14 | 15.71 |
| 1965---- | 3 | 472 | 48,656,680 | 10 | 1,483 | 70,974,920 | 22 | 1,721 | 115,938,040 | | | | 35 | 3,676 | 235,569,640 | .15 | 15.60 |
| 1966---- | 7 | 575 | 51,049,854 | 11 | 1,564 | 72,810,214 | 20 | 1,849 | 117,116,584 | | | | 38 | 3,988 | 240,976,652 | .16 | 16.55 |
| 1967---- | 7 | 587 | 46,950,538 | 13 | 1,525 | 68,849,839 | 21 | 1,761 | 113,321,324 | | | | 41 | 3,873 | 229,121,701 | .18 | 16.90 |
| 1968---- | 2 | 539 | 50,182,068 | 3 | 1,519 | 63,780,858 | 22 | 1,720 | 112,777,395 | | | | 27 | 3,778 | 226,740,321 | .12 | 16.66 |
| 1969---- | 6 | 620 | 54,800,420 | 10 | 1,481 | 63,651,363 | 13 | 1,880 | 113,158,989 | | | | 29 | 3,981 | 231,610,772 | .13 | 17.19 |
| 1970---- | 8 | 722 | 57,297,140 | 10 | 1,595 | 62,293,048 | 14 | 1,901 | 111,422,161 | | | | 32 | 4,218 | 231,012,349 | .14 | 18.26 |
| 1971---- | 9 | 601 | 50,833,611 | 9 | 1,567 | 55,723,029 | 21 | 2,109 | 112,503,948 | | | | 39 | 4,277 | 219,060,588 | .18 | 19.52 |
| 1972---- | 5 | 505 | 45,294,199 | 7 | 1,348 | 47,333,026 | 23 | 1,908 | 92,030,737 | | | | 35 | 3,761 | 184,658,162 | .19 | 20.37 |
| 1973---- | 5 | 412 | 47,221,609 | 7 | 630 | 41,789,944 | 19 | 716 | 60,843,351 | | | | 31 | 1,758 | 149,854,904 | .21 | 11.73 |
| 1974---- | 4 | 470 | 49,956,117 | 5 | 599 | 43,228,356 | 14 | 821 | 63,686,095 | | | | 23 | 1,890 | 156,870,568 | .15 | 12.05 |
| 1975---- | 2 | 604 | 52,855,872 | 12 | 666 | 42,341,402 | 6 | 747 | 59,181,173 | | | | 20 | 2,017 | 154,378,447 | .13 | 13.07 |
| 1976---- | 2 | 717 | 59,661,281 | 8 | 841 | 46,707,152 | 14 | 1,235 | 83,109,908 | | | | 24 | 2,793 | 189,478,341 | .13 | 14.74 |
| 1977---- | 8 | 631 | 54,331,797 | 6 | 918 | 49,456,554 | 18 | 1,623 | 87,726,841 | | | | 32 | 3,172 | 191,515,192 | .17 | 16.56 |

NA Not available.
1/ Nonmetal mill data (excluding clay mills) first compiled in 1955; clay mill data first compiled in 1956.
2/ Plant data included with sand and gravel mine data.

TABLE 34. - Injury experience and worktime data for officeworkers at metal operations, 1955-77 1/

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1955 | - | 3 | 3 | NA | 3 | - | 0.42 | 0.42 | NA | 0.42 | - | NA | NA | 3,192 | 7,172 |
| 1956 | - | - | - | NA | - | - | - | - | NA | - | - | - | - | 4,315 | 9,640 |
| 1957 | - | 2 | 2 | NA | 2 | - | .26 | .26 | NA | .26 | - | - | - | 3,676 | 7,957 |
| 1958 | - | 4 | 4 | NA | 4 | - | .41 | .41 | NA | .41 | - | 68 | 68 | 2,579 | 4,930 |
| 1959 | - | 8 | 8 | NA | 8 | - | 1.59 | 1.59 | NA | 1.59 | - | 70 | 70 | 2,585 | 5,035 |
| 1960 | - | 5 | 5 | NA | 5 | - | 1.15 | 1.15 | NA | 1.15 | - | 3 | 3 | 2,363 | 5,197 |
| 1961 | - | 5 | 5 | NA | 5 | - | .46 | .46 | NA | .46 | - | 12 | 12 | 4,273 | 10,762 |
| 1962 | - | 4 | 4 | NA | 4 | - | .44 | .44 | NA | .44 | - | 34 | 34 | 4,434 | 9,195 |
| 1963 | - | 11 | 11 | NA | 11 | - | 1.26 | 1.26 | NA | 1.26 | - | 29 | 29 | 4,091 | 8,736 |
| 1964 | - | 14 | 14 | NA | 14 | - | 1.57 | 1.57 | NA | **1.57** | - | 66 | 66 | 4,114 | 8,940 |
| 1965 | - | 4 | 4 | NA | 4 | - | .44 | .44 | NA | .44 | - | - | - | 4,176 | 9,180 |
| 1966 | - | 3 | 3 | NA | 3 | - | .23 | .23 | NA | .23 | - | - | - | 5,934 | 12,961 |
| 1967 | - | 11 | 11 | NA | 11 | - | .86 | .86 | NA | .86 | - | 21 | 21 | 5,117 | 12,772 |
| 1968 | - | 9 | 9 | NA | 9 | - | .72 | .72 | NA | .72 | - | 83 | 83 | 5,627 | 12,457 |
| 1969 | - | 3 | 3 | NA | 3 | - | .21 | .21 | NA | .21 | - | - | - | 5,345 | 13,972 |
| 1970 | - | 13 | 13 | NA | 13 | - | .93 | .93 | NA | .93 | - | 21 | 21 | 5,397 | 14,014 |
| 1971 | - | 8 | 8 | NA | 8 | - | .53 | .53 | NA | .53 | - | 12 | 12 | 5,454 | 15,026 |
| 1972 | - | 9 | 9 | NA | 9 | - | .65 | .65 | NA | .65 | - | 35 | 35 | 6,444 | 13,780 |
| 1973 | - | 11 | 11 | 14 | 25 | - | .69 | .69 | .88 | 1.56 | - | 13 | 13 | 9,253 | 15,477 |
| 1974 | - | 10 | 10 | 11 | 21 | - | .62 | .62 | .68 | 1.29 | - | 18 | 18 | 9,136 | 16,224 |
| 1975 | - | - | - | 20 | 27 | - | .37 | .37 | 1.07 | 1.44 | - | 10 | 10 | 10,285 | 18,143 |
| 1976 | - | 11 | 11 | 19 | 30 | - | .53 | .53 | .92 | 1.45 | - | 11 | 11 | 10,429 | 20,671 |
| 1977 | 1 | 4 | 5 | 29 | 34 | 0.04 | .18 | .23 | 1.31 | 1.53 | 270 | 2 | 272 | 11,750 | 22,219 |

NA Not available.
1/ Officeworker data for ore-dressing not available before 1961.

TABLE 35. - Injury experience and worktime data for officeworkers at nonmetal operations, 1955-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1955 | - | 5 | 5 | NA | 5 | - | 1.34 | 1.34 | NA | 1.34 | - | NA | NA | 1,769 | 3,716 |
| 1956 | - | 2 | 2 | NA | 2 | - | .51 | .51 | NA | .51 | - | 2 | 2 | 1,944 | 3,917 |
| 1957 | - | [illegible] | [illegible] | NA | [illegible] | - | 1.26 | 1.26 | NA | 1.26 | - | 122 | 122 | 2,624 | 5,562 |
| 1958 | 2 | 5 | [illegible] | NA | [illegible] | 0.31 | .79 | 1.11 | NA | 1.11 | 1,895 | 11 | 1,906 | 3,036 | 6,331 |
| 1959 | 1 | [illegible] | 8 | NA | 8 | .14 | 1.01 | 1.16 | NA | 1.16 | 869 | 30 | 899 | 3,331 | 6,907 |
| 1960 | - | 8 | 8 | NA | 8 | - | 1.07 | 1.07 | NA | 1.07 | - | 5 | 5 | 3,708 | 7,483 |
| 1961 | - | 9 | 9 | NA | 9 | - | 1.13 | 1.13 | NA | 1.13 | - | 25 | 25 | 3,825 | 7,997 |
| 1962 | - | [illegible] | [illegible] | NA | [illegible] | - | .92 | .92 | NA | .92 | - | 28 | 28 | 4,304 | 7,619 |
| 1963 | - | 4 | 4 | NA | 4 | - | .53 | .53 | NA | .53 | - | 6 | 6 | 3,630 | 7,482 |
| 1964 | - | 4 | 4 | NA | 4 | - | .45 | .45 | NA | .45 | - | 27 | 27 | 4,363 | 8,801 |
| 1965 | - | 6 | 6 | NA | 6 | - | .65 | .65 | NA | .65 | - | 19 | 19 | 4,359 | 9,173 |
| 1966 | 1 | 13 | 14 | NA | 14 | .10 | 1.35 | 1.45 | NA | 1.45 | 623 | 28 | 651 | 4,631 | 9,628 |
| 1967 | - | 16 | 16 | NA | 16 | - | 1.71 | 1.71 | NA | 1.71 | - | 61 | 61 | 4,362 | 9,382 |
| 1968 | - | 3 | 3 | NA | 3 | - | .35 | .35 | NA | .35 | - | 6 | 6 | 4,056 | 8,541 |
| 1969 | - | 8 | 8 | NA | 8 | - | .93 | .93 | NA | .93 | - | 12 | 12 | 4,041 | 8,594 |
| 1970 | - | 12 | 12 | NA | 12 | - | 1.40 | 1.40 | NA | 1.40 | - | 17 | 17 | 4,077 | 8,597 |
| 1971 | - | 8 | 8 | NA | 8 | - | 1.16 | 1.16 | NA | 1.16 | - | [illegible] | [illegible] | 3,361 | 6,870 |
| 1972 | - | 5 | 5 | NA | 5 | - | .79 | .79 | NA | .79 | - | 2 | 2 | 3,061 | 6,292 |
| 1973 | - | 3 | 3 | 14 | 17 | - | .37 | .37 | 1.72 | 2.09 | - | 2 | 2 | 4,449 | 8,121 |
| 1974 | - | 2 | 2 | 6 | 8 | - | .21 | .21 | .62 | .82 | - | 1 | 1 | 5,377 | 9,715 |
| 1975 | - | 4 | 4 | [illegible] | 11 | - | .36 | .36 | .62 | .98 | - | 6 | 6 | 5,896 | 11,203 |
| 1976 | - | 5 | 5 | 6 | 11 | - | .43 | .43 | .51 | .94 | - | 3 | 3 | 6,503 | 11,753 |
| 1977 | | 4 | 4 | 3 | [illegible] | - | .31 | .31 | .23 | .54 | - | 37 | 37 | 7,048 | 12,850 |

NA Not available.

TABLE 36. - Injury experience and worktime data for officeworkers at stone operations, 1955-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man hours | | | Average men working daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1955 | 1 | 8 | 9 | NA | 9 | 0.10 | 0.80 | 0.90 | NA | 0.90 | 602 | NA | NA | 4,697 | 9,973 |
| 1956 | - | 4 | 4 | NA | 4 | - | .38 | .38 | NA | .38 | - | NA | NA | 4,940 | 10,660 |
| 1957 | - | 14 | 14 | NA | 14 | - | 1.26 | 1.26 | NA | 1.26 | - | NA | NA | 5,192 | 11,086 |
| 1958 | - | 14 | 14 | NA | 14 | - | 1.19 | 1.19 | NA | 1.19 | - | NA | NA | 5,632 | 11,743 |
| 1959 | 1 | 12 | 13 | NA | 13 | .08 | .93 | 1.00 | NA | 1.00 | 464 | NA | NA | 6,050 | 12,935 |
| 1960 | - | 9 | 9 | NA | 9 | - | .73 | .73 | NA | .73 | - | NA | NA | 5,896 | 12,365 |
| 1961 | - | 11 | 11 | NA | 11 | - | .87 | .87 | NA | .87 | - | NA | NA | 5,983 | 12,676 |
| 1962 | - | 7 | 7 | NA | 7 | - | .46 | .46 | NA | .46 | - | 15 | 15 | 7,134 | 15,210 |
| 1963 | - | 12 | 12 | NA | 12 | - | .81 | .81 | NA | .81 | - | 40 | 40 | 6,936 | 14,752 |
| 1964 | - | 7 | 7 | NA | 7 | - | .50 | .50 | NA | .50 | - | 19 | 19 | 6,457 | 13,862 |
| 1965 | - | 8 | 8 | NA | 8 | - | .57 | .57 | NA | .57 | - | 3 | 3 | 6,631 | 14,113 |
| 1966 | - | 10 | 10 | NA | 10 | - | .65 | .65 | NA | .65 | - | 7 | 7 | 7,070 | 15,346 |
| 1967 | - | 11 | 11 | NA | 11 | - | .72 | .72 | NA | .72 | - | 7 | 7 | 7,187 | 15,292 |
| 1968 | - | 9 | 9 | NA | 9 | - | .61 | .61 | NA | .61 | - | 7 | 7 | 6,926 | 14,687 |
| 1969 | - | 7 | 7 | NA | 7 | - | .47 | .47 | NA | .47 | - | 10 | 10 | 7,060 | 14,967 |
| 1970 | - | 13 | 13 | NA | 13 | - | .85 | .85 | NA | .85 | - | 10 | 10 | 7,258 | 15,362 |
| 1971 | - | 10 | 10 | NA | 10 | - | .62 | .62 | NA | .62 | - | 12 | 12 | 7,714 | 16,071 |
| 1972 | - | 3 | 3 | NA | 3 | - | .22 | .22 | NA | .22 | - | 2 | 2 | 6,462 | 13,503 |
| 1973 | - | 5 | 5 | 12 | 17 | - | .35 | .35 | 0.83 | 1.18 | - | 6 | 6 | 7,980 | 14,431 |
| 1974 | - | 3 | 3 | 14 | 17 | - | .20 | .20 | .94 | 1.14 | - | 2 | 2 | 8,325 | 14,940 |
| 1975 | - | 3 | 3 | 5 | 8 | - | .19 | .19 | .31 | .50 | - | 5 | 5 | 8,827 | 16,121 |
| 1976 | - | 14 | 14 | 9 | 23 | - | .68 | .68 | .44 | 1.12 | - | 10 | 10 | 11,011 | 20,545 |
| 1977 | - | 13 | 13 | 18 | 31 | - | .61 | .61 | .84 | 1.44 | - | 29 | 29 | 11,508 | 21,460 |

NA Not available.

TABLE 37. - Injury experience and worktime data for officeworkers at sand and gravel operations, 1958-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1958 | - | 2 | 2 | NA | 2 | - | 0.32 | 0.32 | NA | 0.32 | - | 7 | 7 | 3,310 | 6,304 |
| 1959 | - | 6 | 6 | NA | 6 | - | .66 | .66 | NA | .66 | - | 20 | 20 | 4,769 | 9,043 |
| 1960 | - | 2 | 2 | NA | 2 | - | .26 | .26 | NA | .26 | - | 3 | 3 | 4,152 | 7,843 |
| 1961 | - | 3 | 3 | NA | 3 | - | .37 | .37 | NA | .37 | - | NA | NA | 4,272 | 8,033 |
| 1962 | - | 5 | 5 | NA | 5 | - | .54 | .54 | NA | .54 | - | 18 | 18 | 4,849 | 9,237 |
| 1963 | 1 | 2 | 3 | NA | 3 | 0.12 | .24 | .36 | NA | .36 | 718 | 7 | 725 | 4,355 | 8,356 |
| 1964 | - | 2 | 2 | NA | 2 | - | .29 | .29 | NA | .29 | - | 3 | 3 | 3,471 | 6,912 |
| 1965 | - | 2 | 2 | NA | 2 | - | .30 | .30 | NA | .30 | - | 4 | 4 | 3,375 | 6,683 |
| 1966 | 1 | 4 | 5 | NA | 5 | .14 | .56 | .70 | NA | .70 | 843 | 10 | 852 | 3,646 | 7,118 |
| 1967 | - | 5 | 5 | NA | 5 | - | .67 | .67 | NA | .67 | - | 11 | 11 | 3,880 | 7,477 |
| 1968 | - | 5 | 5 | NA | 5 | - | .70 | .70 | NA | .70 | - | 20 | 20 | 3,686 | 7,171 |
| 1969 | - | 3 | 3 | NA | 3 | - | .43 | .43 | NA | .43 | - | 30 | 30 | 3,569 | 6,922 |
| 1970 | - | 4 | 4 | NA | 4 | - | 1.22 | 1.22 | NA | 1.22 | - | 23 | 23 | 3,798 | 7,365 |
| 1971 | - | 3 | 3 | NA | 3 | - | .38 | .38 | NA | .38 | - | 2 | 2 | 4,031 | 7,870 |
| 1972 | - | 8 | 8 | NA | 8 | - | 1.11 | 1.11 | NA | 1.11 | - | 11 | 11 | 3,753 | 7,225 |
| 1973 | - | 3 | 3 | 4 | 7 | - | .45 | .45 | 0.60 | 1.05 | - | 13 | 13 | 4,398 | 6,698 |
| 1974 | - | 1 | 1 | 1 | 2 | - | .15 | .15 | .15 | .30 | - | (1/) | (1/) | 4,877 | 6,760 |
| 1975 | - | 3 | 3 | 1 | 4 | - | .38 | .38 | .13 | .50 | - | 19 | 19 | 5,496 | 7,965 |
| 1976 | - | 3 | 3 | - | 3 | - | .37 | .37 | - | .37 | - | 24 | 24 | 5,887 | 8,145 |
| 1977 | - | - | - | 2 | 2 | - | - | - | .23 | .23 | - | - | - | 5,833 | 8,531 |

NA Not available.
1/ Less than 0.5.

TABLE 38. - Injury experience and worktime data for officeworkers at coal operations, 1964-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1964 | - | - | - | NA | - | - | - | - | NA | - | - | - | - | 2,823 | 5,134 |
| 1965 | 1 | 1 | 2 | NA | 2 | 0.16 | 0.16 | 0.32 | NA | 0.32 | 961 | 6 | 967 | 3,514 | 6,245 |
| 1966 | - | 2 | 2 | NA | 2 | - | .37 | .37 | NA | .37 | - | 35 | 35 | 2,922 | 5,473 |
| 1967 | - | - | - | NA | - | - | - | - | NA | - | - | - | - | 2,779 | 5,186 |
| 1968 | - | 2 | 2 | NA | 2 | - | .39 | .39 | NA | .39 | - | 5 | 5 | 2,605 | 5,108 |
| 1969 | - | - | - | NA | - | - | - | - | NA | - | - | - | - | 2,640 | 5,201 |
| 1970 | - | - | - | NA | - | - | - | - | NA | - | - | - | - | 2,687 | 5,411 |
| 1971 | - | 2 | 2 | NA | 2 | - | .31 | .31 | NA | .31 | - | 8 | 8 | 3,424 | 6,539 |
| 1972 | - | 6 | 6 | 33 | 39 | - | .78 | .78 | 4.29 | 5.07 | - | 21 | 21 | 4,926 | 7,690 |
| 1973 | - | 10 | 10 | 42 | 52 | - | 1.11 | 1.11 | 4.67 | 5.78 | - | 41 | 41 | 4,649 | 9,002 |
| 1974 | - | 8 | 8 | 21 | 29 | - | .86 | .86 | 2.26 | 3.12 | - | 77 | 77 | 5,277 | 9,294 |
| 1975 | - | 12 | 12 | 11 | 23 | - | 1.07 | 1.07 | .98 | 2.05 | - | 32 | 32 | 6,250 | 11,221 |
| 1976 | - | 17 | 17 | 29 | 46 | - | 1.37 | 1.37 | 2.33 | 3.70 | - | 34 | 34 | 6,623 | 12,436 |
| 1977 | - | 15 | 15 | 21 | 36 | - | 1.13 | 1.13 | 1.58 | 2.71 | - | 87 | 87 | 7,037 | 13,285 |

NA Not available.

TABLE 39. - Injury experience and worktime data for officeworkers at coal, metal, nonmetal, stone and sand and gravel operations, 1955-77

| Year | Injuries | | | | | Frequency rates per million man-hours | | | | | Severity rates per million man-hours | | | Average men working daily | Man-hours worked (thousands) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | Non-disabling | All injuries | Fatal | Nonfatal disabling | All disabling | | |
| 1955 | 1 | 16 | 17 | NA | 17 | 0.05 | 0.77 | 0.82 | NA | 0.82 | 289 | NA | NA | 9,658 | 20,763 |
| 1956 | - | 6 | 6 | NA | 6 | - | .25 | .25 | NA | .25 | - | (1/) | (1/) | 11,099 | 24,217 |
| 1957 | - | 23 | 23 | NA | 23 | - | .94 | .94 | NA | .94 | - | 30 | 30 | 11,492 | 24,405 |
| 1958 | 2 | 25 | 27 | NA | 27 | .07 | .85 | .92 | NA | .92 | 409 | 15 | 425 | 14,557 | 29,308 |
| 1959 | 2 | 33 | 35 | NA | 35 | .06 | .97 | 1.03 | NA | 1.03 | 354 | 22 | 376 | 16,735 | 33,921 |
| 1960 | - | 25 | 25 | NA | 25 | - | .76 | .76 | NA | .76 | - | 2 | 2 | 16,139 | 32,868 |
| 1961 | - | 28 | 28 | NA | 28 | - | .71 | .71 | NA | .71 | - | 8 | 8 | 18,853 | 39,458 |
| 1962 | - | 23 | 23 | NA | 23 | - | .56 | .56 | NA | .56 | - | 22 | 22 | 20,721 | 41,260 |
| 1963 | 1 | 29 | 30 | NA | 30 | .03 | .74 | .76 | NA | .76 | 153 | 24 | 177 | 19,012 | 39,328 |
| 1964 | - | 27 | 27 | NA | 27 | - | .62 | .62 | NA | .62 | - | 25 | 25 | 21,228 | 43,649 |
| 1965 | 1 | 21 | 22 | NA | 22 | .02 | .46 | .48 | NA | .48 | 132 | 8 | 140 | 22,055 | 45,395 |
| 1966 | 2 | 32 | 34 | NA | 34 | .04 | .63 | .67 | NA | .67 | 238 | 14 | 252 | 24,207 | 50,525 |
| 1967 | - | 43 | 43 | NA | 43 | - | .86 | .86 | NA | .86 | - | 21 | 21 | 24,345 | 50,109 |
| 1968 | - | 28 | 28 | NA | 28 | - | .58 | .58 | NA | .58 | - | 28 | 28 | 22,900 | 47,964 |
| 1969 | - | 21 | 21 | NA | 21 | - | .42 | .42 | NA | .42 | - | 11 | 11 | 23,655 | 49,656 |
| 1970 | - | 47 | 47 | NA | 47 | - | .93 | .93 | NA | .93 | - | 15 | 15 | 24,217 | 50,748 |
| 1971 | - | 31 | 31 | NA | 31 | - | .59 | .59 | NA | .59 | - | 9 | 9 | 25,384 | 52,365 |
| 1972 | - | 31 | 31 | 33 | 64 | - | .64 | .64 | 0.68 | 1.32 | - | 16 | 16 | 24,651 | 48,490 |
| 1973 | - | 32 | 32 | 86 | 118 | - | .59 | .59 | 1.59 | 2.18 | - | 14 | 14 | 30,729 | 54,230 |
| 1974 | - | 24 | 24 | 53 | 77 | - | .42 | .42 | .93 | 1.35 | - | 18 | 18 | 32,992 | 56,934 |
| 1975 | - | 29 | 29 | 44 | 73 | - | .44 | .44 | .67 | 1.12 | - | 13 | 13 | 36,754 | 65,254 |
| 1976 | - | 50 | 50 | 63 | 113 | - | .68 | .68 | .86 | 1.54 | - | 15 | 15 | 40,853 | 73,549 |
| 1977 | 1 | 36 | 37 | 73 | 110 | .01 | .46 | .47 | .93 | 1.40 | 77 | 29 | 106 | 43,176 | 78,345 |

NA Not available.
1/ Less than 0.5.



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